



Editorial Notes.

MR. JOHN CARGILL BROUGH, F.C.S.

IT is with no mere official expressions of sorrow that we record the death of Mr. Brough, who for ten years was editor of this journal. For a long time past we have all been assured that he could not remain with us long, but his own unvarying cheerfulness and patience partially veiled the truth from us, and so, when at last the news came of his death, we seemed almost startled at its suddenness. We will not in this notice allude to Mr. Brough's many talents; it would be out of place for us to do so. On another page we print a tribute to his memory written by one of his closest friends, which well shows how many-sided his character was. All who knew him loved him. He possessed a really singular power of attracting respect and affection. His own home was always his centre, and very beautiful his home life was; but wherever he went, and in all his occupations it was only necessary to be associated with him for never so short a time, and the charm had affected all who surrounded him. As Principal Librarian of the London Institution he had attained a position of honour, and one for which his talents eminently fitted him. He gave all the energy of his nature to his work, and was fully recognised by all the proprietors as the right man in the right place. Those who heard his juvenile lectures on "Magic" last Christmas time, and saw the hundreds of happy little faces that crowded around his platform, will have some notion of the mysterious influence whereby he won so many friends. He battled bravely with the disease which was stealing on him, and medical skill drew out the slight thread of his strength to its utmost attenuation. He had left London for two months with his family, hoping to regain enough invigoration among the Surrey hills to carry out his plans for another session, but when the time came for him to return the hand of death was laid upon him. His illness was a very painful one, and he died on the morning of last Saturday, September 7th, at the age of 33. He was buried on Thursday at Norwood. A few of our readers were personally acquainted with Mr. Brough; to them we fear these lines will seem but bare justice to the memory of one whose whole life was so beautiful. However much more we might add, we should but weakly convey the esteem in which Mr. Brough's memory will ever be held by the proprietors of this journal, and by every one who shared with him its labours.

PHARMACY AT SEA.

It will never be possible to carry out the regulations of the Pharmacy Act on ships at sea, and poor Jack must always be subject to the tender mercies of his skipper when he is an invalid. Some humorous anecdotes are current respecting the use and abuse of the medicine chest on board British merchant vessels. The following occurrence is vouched for:—A sailor applied to his captain for relief, announcing that he seemed to have something on his stomach. The Captain referred to his book of directions, and promptly prescribed a dose of No. 15. Unfortunately, however, there had been a run on No. 15, and the bottle was empty. But the skipper was by no means at the end of his resources, and probably a remembrance of old games of cribbage came to his mind. There was plenty of No. 8, and plenty of No. 7. "Seven and eight make fifteen," said the Captain; and Jack, to whom the calculation seemed quite natural, took the joint mixture with startling effect; for whatever was on his stomach came up with a rapidity that would have astonished the Royal College of Physicians, and which a landsman might have envied.

A SCIENTIFIC PARADISE.

If all the world would follow the example of Dubuque, Iowa, United States, we could guarantee a very sufficient and constant supply of scientific investigation. Our contemporary, *Nature*, tells us that the American Association for the advancement of Science has been holding its session at that somewhat obscure town, or rather city, and that the citizens thereof had determined that all members attending the meeting should be entertained at their private residences free of charge during the session; furthermore, it was

expected that their travelling expenses would also be remitted by the various railroads and steamboat lines. *Nature* concludes by saying—"a very successful meeting was anticipated." We think it extremely probable that, if the circumstances indicated came to pass, and were generally known, the most sanguine anticipations were abundantly realised.

CONFERENCE ENTERTAINMENTS.

MR. W. D. SAVAGE, of Brighton, has addressed us a letter in deprecation of a course which, it is anticipated, may be taken by the Executive Committee of the British Pharmaceutical Conference. This Committee happens to be composed of gentlemen, and it is felt by some of them desirable to pass a stringent regulation in order to prevent the generosity of some towns from becoming established as a precedent. The members of the Conference from London, who always make a considerable contingent at these gatherings, are delicate about going from town to town, and accepting the hospitality so generously shown, and which they have no opportunity of returning in like manner. On the other side, Mr. Savage intimates that the chemists and druggists of Brighton would have regarded it really as a hardship, if they had been prevented from inviting a friendly party of their *confrères* on the one occasion in perhaps twenty years, which they can possibly have. There is no doubt that both entertainers and guests find these reunions most enjoyable, and productive of pleasant remembrances. Therefore the Executive Committee must not prohibit them entirely. A way out of the difficulty might be made if it were decided as a rule of the Conference, that an annual dinner should be provided in whatever town the Conference might meet, the

price of tickets to which to be fixed and invariable, and the profit, if any, or if otherwise the loss, to be taken or borne, as the case might be, by the Conference itself. The local committees would doubtless undertake the labour of arranging for these dinners, and by thus pandering to the Epicurean and social elements of pharmaceutical nature, the Executive Committee might calmly proceed to fulfil its more strictly legitimate destiny.

CIVIL SERVICE ITEMS.

In a speech towards the close of last session of parliament, Mr. Lowe stated that "Civil Servants" were absolutely prohibited from engaging in mercantile pursuits *if those pursuits took up any portion of the time which they owed to the public.*

We will take care that our portion of the trading public shall not forget these ominous words. We consider that the position of the managers of the Civil Service Co-operative Stores is perfectly untenable, and as it is insulting and injurious to the retail traders of this country, we do hope to see a united front and a determined fight next year. We refer our readers to a letter in this issue from the Secretary of the National Chamber of Trade, in response to our remarks last month. From the paper issued by the Chamber we quote the following paragraph, and urge it on the attention of our readers:—

The Civil Servants of the Crown are now agitating for an increase of salary in consideration of the INCREASED COST OF LIVING, as may be seen by the correspondence in the Press (vide "Civilian" of August 10th, the accredited organ of the Civil Service). The National Chamber of Trade urges the Traders of Great Britain to protest individually against this movement, by communicating with their Members of Parliament, against this very questionable demand on the part of Public Servants, whose day's work averages four and a-half hours, and who have established their Co-operative Stores to the prejudice of the tax-payers.

We also quote from the last published report of the Haymarket stores the following:—

The want of space at the stores has for some time considerably cramped the operations of the Society, but fortunately an arrangement has recently been made by which the Directors have secured the adjoining premises, No. 27, Haymarket, except the ground or shop-floor. This additional accommodation has enabled them to more fully develop the Wine, Drapery, and Chemical Departments by the addition of many new articles of stock, including plain Silks of superior quality. *The Chemical Department will also be enabled to undertake a larger Dispensing business.*

Now we want to know whether the last sentence of this paragraph is not clear proof of open violation of the Pharmacy Act? If so, how long are these big offenders to go on unpunished? That question we submit to the Pharmaceutical Council. They would have the satisfaction of attacking somebody of their own size if they would fight these Stores.

Again, we want to comprehend how Henry Ancell, Esq., of the Admiralty, manages to earn £500 per annum from a grateful nation, and, at the same time, to give £630 worth of aid to the Civil Service Co-operative Society (Limited) as Managing Director, without sacrificing any portion of that time which he owes to the public. This is but one of many difficulties which beset us, but to bring them into a focus we want to see chemists, grocers, drapers, and all other tradesmen combine resolutely against this unfair competition, and then we are confident it will not be long before Henry Ancell, Esq., and his friends will strike their tents like the Arabs, and silently steal away. Just before going to press we are informed that the National Chamber of Trade will hold a Trade Conference next month, expressly, as we understand it, to consider the Civil Service question from a chemist and druggist point of view. Mr. Haselden, the President of the Pharmaceutical Society, has promised to take the chair.

Foreign Correspondence.

UNITED STATES.

New York, August 23, 1872.

SINCE my previous letter but little has occurred in the pharmaceutical world that would interest your readers. The fearfully "heated term" which our land has been visited with during the past two months is enough to keep all investigations quiet, and compel them to seek rest of body and mind. The temperature during this period has been unusually high for long periods, and the peculiar condition of the atmosphere has caused much malarial and other febrile troubles. The highest average range of the thermometer during July was 85° F., and for August thus far is 84°. But even this can give no idea of the oppressive heat, or the suffering of our citizens in bodily health and spirits. Especially has the mortality (as usual) been very heavy among the infantile portion of the community. During the very severe hot weather in the latter part of June and early portion of July the death-rate of our city was really alarming. Never, except when some dire plague, such as cholera or yellow fever, has been in the midst, have so many died as this year from heat and those diseases which are developed by malarial and similar causes. The poor have been the victims in larger numbers than those upon whom a kind Providence has bestowed more plentiful gifts.

This fact has developed one of the most extraordinary and yet most beneficent charities this city has ever enjoyed. I allude to the excursions for poor children, which have been organized and carried on with splendid success by the leaders of one of the best daily newspapers in this city, the *New York Times*, with an efficient corps of volunteer and other assistants.

This noble charity grew out of some leading articles written in that paper, and from a very humble beginning a fund of almost 20,000 dollars has been voluntarily contributed to aid the poor children of this city by giving them free excursions into the surrounding country, where they could breathe the fresh air denied them in their miserable abodes. Besides this, the sick and suffering have been visited in their homes, and helping hands have given them food, raiment, medicines, attendance, and comforts, to which they had been strangers for many a long day. In this benevolent labour many of our excellent citizens have cheerfully given much personal exertion, while the fact that such a large sum was so speedily contributed voluntarily and chiefly in small sums, shows the willingness of the people to give liberally when they see a worthy cause. In fact, the *Times* has recently had to announce that they need no further contributions for that object.

From this fund some fifteen excursions have been given, and, at least, 20,000 children who never see the country have been treated to a fine sail, a day in the woods or on the sea shore, with plenty of fun and good food, and in no case has there been any serious trouble in managing these "street Arabs" and others.

Other cities have followed the example, and the poor children may look upon this summer as a season to be remembered with gratitude and pleasure by them.

In things political, since my last letter the farce has been enacted of celebrating the last "new departure," that of a national political organization taking as their standard-bearer in the approaching presidential contest, the man who has always abused them the worst of any political man of the day. Unable to name any one of their own rank who would be likely to be popular enough to risk in such a contest, they apparently approve of that which they have always heretofore condemned, though really it is only a means to secure an end, that end being *political power and plunder*. But I will not add more on politics in this than to say that everything looks favourable for the re-election of President Grant, and the continuance of the present wise and careful administration.

In things pharmaceutical we are anxiously awaiting the appearance of the new Pharmacopœia. We are assured that the work is progressing, but those who are not on the final Committee of Revision know but little as to what has been

done or the changes anticipated. It is believed that it will be ready for publication before the close of the year.

The Boards of Examination in this city and Philadelphia continue their labours, and with satisfactory results. In my next letter particulars will be given.

The annual meeting of the American Pharmaceutical Association is near at hand. The city of Cleveland, one of the most beautiful of the older western cities, lies on the southern shore of Lake Erie, and is an important centre of manufacturing and railroad interests. Laid out in regular streets and avenues, many of them magnificently adorned with shade trees and elegant residences, it is one of the most attractive cities to visit. Our brethren of the "mortar and pestle" in that city have made excellent arrangements for the comfort of those who shall attend the meeting, and those who avail themselves of this opportunity will greatly enjoy the occasion. My next letter will give you an account of the meeting.

The Colleges of Pharmacy anticipate greatly increased classes during the coming session. The effect of the passage of pharmacy laws in several of the states will be to make the colleges more popular than ever, and thus improve the rising race of pharmacists.

The formation of local pharmaceutical bodies in your own land has its counterpart with us. In Maine, Vermont, New Jersey, California, and Mississippi, such organizations have made an excellent start, and are doing good work for the cause. The New Jersey Association met a few days ago at Long Branch, and after some routine business discussions, have agreed to urge the passage of the Pharmacy Act in spite of two previous failures.

QUÆ QUONDAM.

BY T. B. GROVES, F.C.S.

I HAVE lately had the good fortune to meet with a file of a very old paper called the *Sherborne Mercury or Weekly Advertiser*, published at Sherborne, in Dorset, during the years 1743-4. In glancing over it I lighted upon several bits of intelligence more or less intimately connected with the physic trade of those days, some of which I have ventured to string together in the form of a paper. The style of composition strikes one as being quaint and stilted; the spelling is quite as antiquated and uncertain as is usual in writings of that period.

Grouping the advertisements, etc., that I propose to make use of, I shall commence with those relating to the business itself. Thus I find at the date Feb. 28, 1744—

"The Widow of Mr. Sanfon, Apothecary, in Sherborne, lately deceased, intending to carry on his business, is now assisted by a person of great Experience in that Profession from London, therefore she hopes the Continuance of the Favour of her Friends, since they may be assured that all imaginable Care shall be taken, and the best Attendance given to Patients. As Mr. Sanfon was remarkable for keeping the best Choice of Drugs and had laid in just before his Death a large Stock, so his Widow is determined always to be very serious in that Respect."

In making the above announcement let us hope that the good lady was keeping within the bounds of the law, and had no official or officious person "came down" upon her as not being either "executrix, administratrix, or trustee."

On September 18, 1744, a well-known and honoured name is introduced into an advertisement of this character:—

"TO BE LET AND ENTERED UPON IMMEDIATELY.

A Convenient House and Shop situated in the Market place in the Town of Wareham, Dorset. Are to be sold reasonable. All the Utensils and Stock in Trade of an Apothecary: the Drugs are true and the Shop well accustomed. Whoever is willing to take off the same will meet with Good Encouragement on applying to Mr. Charles Poston, Apothecary, Sturminster—Newton Castle, or at the said shop any Market Day, it being to be kept open every Market Day until disposed of. The House and Shop may be seen by applying to Mr. John Redwood at Wareham. The Utensils are to be sold either with or without the Stock in Trade."

Apocrypha of ancient utensils, a singular accident occurred to me. My father, on commencing business some fifty-three years ago, purchased a beautiful little bell-metal mortar at second-hand from a friend. For some thirty or forty years

it was used whenever required, and that not unfrequently, without anyone having had the curiosity to examine its ornamented border. At last I did so on observing a date upon it. Greatly to my amazement, I read this legend in capital letters:—"Thomas Grove, 1688." A singular coincidence. I really think that before selling the mortar I would raise the wind by disposing of my pharmaceutical diploma itself should I ever succeed in discovering the whereabouts of that valuable document.

The next is rather surgical than pharmaceutical. It is, however, somewhat interesting. Its date is June 5, 1744:—

"Mr. Grant, Oculist and Operator for the Eyes, having several Persons to attend in this Country, thought proper to publish this Advertisement, that all Persons that are any ways disordered in their Eyes may take this Opportunity of applying themselves to him, who will satisfy them on Sight, without any Expence, whether they are curable or not; if not, he scorns to take them in Hand, but if curable he will readily assist them on reasonable terms. Mr. Grant has restored many to Sight, after they had been entirely deprived of it, some thirty and some forty years, and some also have been brought to Sight by him who were born Blind, &c. &c."

The years 1743-4 were unusually troublous, owing to the war of the Austrian Succession, which commenced in 1741, and did not terminate till 1748. In 1743 was gained the celebrated victory of Dettingen, that gave occasion for the no less famous "Te Deum," composed by Handel in honour of the event. It is reasonable to suppose that the minds of young men were not a little disturbed by the warlike news published weekly, and with considerable detail in the local paper. Reports of battles naval and military, the exploits and monetary gains of the privateers that were constantly bringing their captures into the Southern harbours, fired many a breast with a desire for glory, and made the duties of a shop appear by comparison, irksome, if not actually unworthy. All this, notwithstanding the antidote was published side by side with the bane, and one could read also of forced levies, of bounties offered by the county magistrates, indicating a lack of desire to serve on the part of the many, the kidnapping of sailors by "press gangs," etc. We meet, therefore, with not a few curious advertisements relating to runaway apprentices, one or two of the quaintest of which I will reproduce.

On May 15, 1744, this occurs—

"Whereas William Grunft, an apprentice to William Harbin, in Dorchester, left his said Master's Service on the 1st of this instant May. He is between the Age of 15 and 16 years, small of his Age, with short dark Hair, a stern Look, wearing a light-coloured Cloth Coat, light Plush Breeches, and a pair of Yarn Stockings. Whoever shall discover the said William Grunot, so that he may be brought to his said master, or Notice thereof given shall have a reasonable Reward."

August 7, 1744, another runaway is thus described:—

"He is about 19 years of Age, middle stature, thin favoured, and of a fallow complexion, with straight black Hair, having lately left off his Wig, and has lost two of his upper Teeth before. He had on when he absconded a Drab-coloured Coat without Folds behind and a Sheep's Ruffed coloured Waistcoat with worked Tin Buttons washed with Silver, also a new Hat with narrow Brims and a Pair of light Worsted Stockings, a Sheep Leather pair of Breeches and a new pair of Shoes. Half Guinea Reward and all reasonable charges."

March 6, 1744, an account is given of a sale of drugs. The prices attached are especially interesting.

"Thursday ended the Sale of Drugs at the East India House, when Hyson Tea sold for 14s. per lb., Congou 7s. 6d., Single 2s. 9d. Opium 12s., Rhubarb 8s., Coffee 11s. 11s. per C., Ammoniacum 6s. 10s., Aloes 8s., Asafœtida 18s. 18s., Benjamin 12s., Bellium 4s., Cassia Lignea 10s. 10s., Coccus Indicæ 2s. 16s., Camphire 20s. 10s., Gumbojam 15s., Dragon's Blood 17s., Galangal 1s. 19s., Gaibanum 10s., Gum Arabic 1s. 6s., Lumplac 1s. 10s., Myrrh 10s. 5s., Olibanum 4s. 2s., Shellack 9s. 10s., Sticklack 4s. 12s., and Turmeric 2s. 16s. per C. on an Average."

It is curious here to observe tea and coffee classed as drugs with opium and rhubarb.

So much for drugs; now one relating to patent medicines. Sundries were then haply an unknown commodity.

"JUST BROUGHT DOWN FROM LONDON.

"Truly prepared at the Original Warehouse in London and appointed to be sold by the Printer of this Paper.

"Dr. Daffy's Famous Cordial Elixir . . . confirmed by 40 years' universal Experience as the best Medicine ever exposed to public Sale for the following Distempers, &c. &c., and in short is the best Family Medicine in the World . . . 15d. per bottle . . . it has this peculiar Quality, that it never leaves the Body cosive, but lightfome and in good Temperative."

I had hoped that the scandalous advertisements that now daily offend the eye by publicly announcing that *her Majesty* has authorised some beastly quack to affix a certain stamp to a filthy preparation for the cure of a nasty disease, were peculiar to our own days. But the "laudator temporis acti" will grieve to find it is not so. I must refer the inquisitive to the publication itself, where may also be found not a few sayings and doings recorded that mark the freedom of the times from any the least taint of mock-modesty.

At least one pharmaceutical animal is catalogued in the following menagerie list:—

"The Female Rhinoceros, or Real Unicorn. The Urey from Asia. A furprising Buffalo. The Firey Lynx. A Man Tyger. Two furprising Wolves. A Turkish Ape. The Whistler of the Woods. A curious Hyæna from Guinea. A Camel eight feet high. A Carniphagus (!) from the Indian Tartary. A Panther. A Leopard. A Riobiscary from Russia. A Satyr of the Woods from Scythia. A Mango from Africa. A Catufardus from Africa. A Turkish Ape much admired for its Ugliness, likewise a Live He Beaver; this Creature is amphibious, being half Fish half Flesh, his Head like a Mountain Rat, his body like a Pig, his Tail a Foot long, like a Soal, his two fore Legs like a Dog, and hind legs like a Swan will be shown at Woodberry-Hill, Shrewton Aimsbury and Way-Hill-Fairs."

It is surprising here to note in a tolerably full and accurate description of the beaver, the absence of any mention of the castoreum follicles. As such a fact as being "doubly endowed" would infallibly have been made the most of in such an announcement as the foregoing, it must be concluded that the unfortunate animal in question had already been deprived of those valuable appendages.

About this time tar-water was the rage, and numerous references to the folly are met with in these pages. From an absurdly eulogistic letter on the Bishop of Cloyne's (Berkeley's) treatise on its virtues, I extract the following:—

"Where shall we see a more accurate Theory of various Distempers or the operations of the most prevailing Medicines upon them? How refined his Doctrine of Metals and their being transmuted into each other! . . . leaves us uncertain whether to admire in him most, the Chemist, Physician, Philosopher, or Divine, &c."

An epigram on the same subject and of the same date will bear quotation.

"Who dares deride what pious Cloyne has done?

"The Church shall rise and vindicate her Son.

"She tells us all her Bishops Shepherds are

"And Shepherds heal their rotten Sheep with TAR."

I might, I hope, be excused for dragging the following in by the horns. It hails from Poole:

"Newton brought Nature's secret Laws to Light.

"But Pope, now thou art dead, once more 'tis Night."

It is to be hoped that our predecessors were largely endowed with patience, and moreover that they were not often needing for the preservation of their lives a hastily procured remedy; for witness the mode of conveyance of those days:—

"FROM FLYING-WAGGON

"Sets out with Goods and Passengers from Froom for London on Monday, and will be at the King's Arms Inn at Holborn Bridge the Wednesday, following, by Twelve o'Clock at Noon. Passengers to pay Eight Shillings each.

"Performed if God permit by Joseph Clavey."

The last clause was doubtless a not unmeaning or unnecessary qualification in days when villainous roads were rendered doubly dangerous by highwaymen and footpads.

I had some idea of dragging in under the title of "Fryar's Balsam," an account of the bouts at cudgel-play and singletick between the gentlemen of Dorset and gentlemen of Somerset; but fearing your readers would regard such an intrusion as scarcely pertinent to pharmacy, I abstain, and conclude with humble apologies for what I fear is not to be characterized as a useful contribution to pharmaceutical literature.

THE FORTHCOMING SESSION.

WE are now close upon the commencement of another session, and our educational bodies are preparing themselves to recommence their labours in earnest. We take this opportunity of presenting to our readers some particulars of educational matters, which we hope will be found useful.

MEDICAL EDUCATION.

The General Medical Council fixes twenty-one as the earliest age at which a candidate for any professional licence shall be admitted to his final examination, the age in all instances to be duly certified. Previous to this final examination, he must have been registered as a medical student at least forty-eight months, and must have gone through a course of professional study, comprehending attendance during four winter sessions or three winter and two summer sessions at a recognised school. The Medical Council also makes certain claims with regard to the examinations themselves. With regard to the Preliminary, which must be passed before a medical student may be registered as such, it is required that it shall include English Language (including Grammar and Composition), Arithmetic (including Vulgar and Decimal Fractions), Algebra (including Simple Equations), Geometry (first two books of Euclid), Latin (including Translation and Grammar); and one of the following optional subjects: Greek, French, German, Natural Philosophy (including Mechanics, Hydrostatics, and Pneumatics).

For the Professional Examination it requires, "That the Professional Examination for a licence be divided into two parts; the first embracing the primary or fundamental branches directly connected with the practice of medicine or surgery. That the former be not undergone till after the close of the winter session of the second year of professional study; and the latter, or final examination, not until after the close of the prescribed period of professional study.

"That the examination in Physics, Botany, and Natural History, may be undergone at an earlier period than the first Professional Examination.

"That the Professional Examinations be conducted both in writing and orally, and that they be practical in all branches in which they admit of being so.

"That excellence in one or more subjects should not be allowed to compensate for failure in others; and that if a candidate be rejected for failure in any one subject, he should be re-examined in all."

The foregoing are the requirements of the General Medical Council which holds, and can withhold, the right of registration. The reader will bear in mind that these stipulations have to be observed by all the examining bodies, and this will save us much repetition.

The examining bodies themselves are the following:—

The University of Oxford, which grants the degrees of M.B. and M.D. The medical student must pass the requisite examinations for the degree of B.A., and afterwards spend two years in study prior to the first or scientific examination for the degree of Bachelor of Medicine, and two years more prior to the final or practical examination for the same degree. Evidence must be brought to show that he has studied the practical parts of his profession in a first-class hospital. A dissertation has to be publicly read three years after the M.B., for the degree of M.D.

The University of Cambridge, besides M.B. and M.D., grants the degree of M.C. (Master in Surgery). For M.B. five years of medical study are required, except in the case of medical students who have graduated with honours as Bachelors of Arts, four years being then sufficient. There are three examinations. The first in Mechanics and Hydrostatics, Chemistry (with heat and electricity), and Botany. The second, in Anatomy and Physiology (Human and Comparative), and Pharmacology. The third (at the conclusion of medical study), in Pathology and the Practice of Physic, Clinical Medicine, and Medical Jurisprudence. The examinations are partly in writing and partly oral, in the hospital, and take place twice annually. Previously to the first examination, lectures must have been attended on

Chemistry (with manipulations) and Botany. Previously to the second examination, the student must have attended lectures on Anatomy and Physiology (Human and Comparative), Materia Medica, Pharmacy and Pathology; have dissected one season; and attended hospital practice one year. Previously to the third examination, lectures must have been attended on the Principles and Practice of Physic, Clinical Medicine, and Medical Jurisprudence; also Hospital Practice for three years.

The degree of M.D. may be taken three years after M.B. The regulations are similar to those at Oxford.

For the degree of M.C., the candidate must have passed the three examinations for M.B., and have attended lectures on Human Anatomy (a second course), on the Principles and Practice of Surgery, Clinical Surgery, Midwifery (with ten cases); also a second season of Dissections, three years' surgical practice at a recognised hospital, and a house-surgeoncy or dressership for six months. He is then required to pass an examination in Surgical Anatomy, Pathology, the Principles and Practice of Surgery, and Clinical Surgery.

The University of London stipulates for the M.B. degree. (1) The Matriculation Examination, or a degree of Arts, is accepted from the Universities of either Sydney, Melbourne, or Calcutta. (2) The Preliminary Scientific Examination and two examinations in medicines. The student must also have been engaged in professional studies at least four years subsequent to matriculation. The degree of M.D. may be competed for four years, or in some cases, five years after the M.B. degree has been taken. It includes logic and moral philosophy and medicine, including practical examination in clinical medicine. The University of London also grants the degrees of B.S. and M.S. (Bachelor and Master in Surgery). These comprehend the M.B.

The University of Durham grants a licence in medicine four years after matriculation, M.B. three years later, and M.D. one year later still, provided that the requisite courses are fulfilled and examinations passed. *Licentiates* and *Masters in Surgery* are also degrees granted by this University. Those do not necessarily require that all the examinations for M.B. shall be passed.

The University of Edinburgh confers the degrees of M.B., C.M., and M.D. The first must be passed before either of the others are granted. For the M.B. and C.M. degrees a course of four years, at least, of medical and surgical study is required, and each candidate is examined both in writing and *visu voce*—1st, on Chemistry, Botany, and Natural History; 2nd, on Anatomy, Institutes of Medicine, Materia Medica, including Practical Pharmacy and Pathology; 3rd, on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; 4th, clinically on Medicine and on Surgery in a hospital. For the M.D. degree two years of medical and surgical practice must elapse, the candidate must be a graduate in Arts, and must submit a thesis composed by himself on any branch of knowledge comprised in the professional examinations for the M.B. degree.

The University of Glasgow grants the same degrees, and provides curricula and examinations similar to those of the University of Edinburgh.

The same may be said of the University of Aberdeen.

Also of the University of St. Andrew's; except that by the latter the degree of Doctor in Medicine may be conferred on any registered medical practitioner above the age of forty years whose professional position and experience are such as, in the estimation of the University, to entitle him to that degree, and who shall, on examination, satisfy the medical examiners of the sufficiency of his professional knowledge; provided always, that degrees shall not be conferred, under this section, to a greater number than ten in any one year.

The University of Dublin (Trinity College) grants the degrees of M.B., M.D., and M. Ch., and also licences in medicine (L.M.) and surgery (L.S.). To take the degree of M.B. it is required that the candidate shall also take that of B.A., and shall have attended hospital and lectures for four years. The M.D. degree is granted to an M.B. of three years' standing, who must perform exercises before the Regius Professor of Physic. The degree of M.Ch. demands a curriculum somewhat different from, though of the same length of time, as that required for the M.B. examination. A licentiate in medicine or surgery has passed the medical

course and examinations required for M.B. or M.Ch. respectively, but the fees are somewhat lower. He can, however, afterwards take up his degree.

The Queen's University in Ireland comprises the Queen's Colleges of Belfast, Cork, and Galway, each of which possesses a Faculty of Medicine. The degrees of M.D. and M.Ch. are granted by this University. The curriculum for either extends over four years, and comprehends the usual subjects.

Besides the foregoing Universities, the following Corporations grant licences to practise:—

The Royal College of Physicians, London. There are Licentiates, Members, and Fellows of the Royal College of Physicians, London. The licentiates have passed a Preliminary Examination in Arts, and two other professional examinations, besides giving evidence of at least four years of professional education as a registered medical student. The fee is fifteen guineas. The course of study previous to the examination for membership is almost similar to that prescribed for the licentiates. Members may also be admitted, after a certain examination, who have taken the degree of M.B. at other Universities. The fee is thirty guineas. The members of the College are eligible for Fellowship.

The Royal College of Surgeons of England. To become a member the following course is prescribed. Preliminary Examination. The following are the subjects for 1871 and 1872:—

Part (1).—Compulsory Subjects:—1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English Grammar. 4. Writing a short English composition; such as a description of place, an account of some useful or natural product, or the like. 5. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of Vulgar Fractions, and of Decimals. 6. Questions on the Geography of Europe, and particularly of the British Isles. 7. Questions on the outlines of English History—that is, the succession of the Sovereigns and the leading events of each reign. 8. Mathematics:—Euclid, Books I. and II., or the subjects thereof; Algebra to Simple Equations inclusive. 9. Translation of a passage from the second book of Cæsar's Commentaries, "De Bello Gallico."

Part (2).—Optional Subjects:—Papers will also be set on the following six subjects, and each candidate will be required to offer himself for examination on one subject at least, at his option; but no candidate will be allowed to offer himself for examination on more than four subjects:—1. Translation of a passage from the First Book of the Anabasis of Xenophon. 2. Translation of a passage from X. B. Saintine's "Picciola." 3. Translation of a passage from Schiller's "Wilhelm Tell." Besides these translations into English, the candidate will be required to answer questions on the grammar of each subject, whether compulsory or optional. 4. Mechanics. The questions will be chiefly of an elementary character. 5. Chemistry. The questions will be on the elementary facts of Chemistry. 6. Botany and Zoology. The questions will be on the classification of Plants and Animals. The quality of the handwriting and the spelling will be taken into account. Certain certificates, as for instance, that of the Middle Class Examinations (Senior), are accepted in lieu of this examination, provided such include Latin and Mathematics. The Professional Education must comprise four years of study subsequent to the preliminary examination, and include certain attendances at Lectures and Hospital Practice. The fee is £22, besides £2 for the preliminary examination. For Fellowship the curriculum is longer, the examinations more severe, and the fees higher. Or a member of eight years' standing may offer himself for the final examination for the Fellowship. The Royal College of Surgeons also grants certificates of qualification in midwifery and in dental surgery.

The Royal College of Physicians, Edinburgh, grants licences in medicine. The fee here is ten guineas. The curriculum is very similar to that which has been described. Any licentiate of a College of Physicians, or graduate of a British or Irish University, with whose knowledge of medical and general science the College may be satisfied, may be admitted a member of the College, provided he shall have attained the age of twenty-four years. The fee to be paid by a member is £31 10s. When a licentiate is raised to

the rank of member he pays £21. When a member is raised to the rank of fellow the fee is £31 10s., exclusive of stamp duty, which amounts to £25.

The Royal College of Surgeons, Edinburgh, also grants diplomas of membership. The fee here for the professional examinations amounts to £10.

The Royal College of Physicians of Edinburgh, and the Royal College of Surgeons of Edinburgh, while they still continue to give their diplomas separately, under separate regulations, have made arrangements by which, after one series of examinations, the student may obtain the diplomas of both colleges. The general principle of this joint examination is, that it shall be conducted by a board in which each body is represented in those branches which are common to both medicine and surgery; but that the College of Physicians shall take exclusive charge of the examination in medicine, and the College of Surgeons of the examination in surgery. The object of the joint examination is, to give to students facilities for obtaining from two separate bodies, and at less expense, a qualification in medicine, and a qualification in surgery. Students passing that examination successfully will be enabled to register two qualifications under the Medical Act—Licentiate of the Royal College of Physicians of Edinburgh, and Licentiate of the Royal College of Surgeons of Edinburgh.

The Faculty of Physicians and Surgeons of Glasgow also grant a diploma. The candidates follow a curriculum, similar to that of the Edinburgh College of Surgeons. The fee for the preliminary examination is 10s., and for the professional examinations £10. In connection with the Royal College of Physicians of Edinburgh a double diploma is also granted. The fee for this, as for the similar double diploma in Edinburgh (professional examinations only), is £16.

The King and Queen's College of Physicians in Ireland grants a licence in medicine, and also a licence in midwifery. A four-year's course of medical study is required, and a special additional examination for the midwifery qualification. The fee for the licence in medicine, 15 guineas; for the midwifery diploma, 3 guineas; or if both are taken out together, £16.

The Royal College of Surgeons in Ireland grants *Letters Testimonial* and Fellowship. For the former a preliminary examination and the usual medical course is required, the total of the fees being £26 15s. For Fellowship the B.A. or an equivalent examination is demanded as preliminary, and a longer course of study. The fee is £47 5s., if the candidate intends to practise within ten miles of Dublin, or £36 15s. otherwise.

The Society of Apothecaries, London, grants a certificate of qualification to practise as an Apothecary, and requires that the candidate shall produce testimonials of having passed a Preliminary Examination in Arts, as a test of general education. Of having served an apprenticeship or pupillage of not less than five years to a practitioner qualified by the Act of 1815. This period may include the time spent in attending lectures and hospital practice. Of having attained the full age of twenty-one years. Of good moral conduct. And of having pursued a course of medical study in conformity with the regulations of the Court. The course of study includes three winter sessions and two summer sessions. The extent of the examinations is modified towards gentlemen holding the diplomas of other examining bodies. The Society also grants a certificate of qualification to act as an assistant, the examination comprising the following subjects:—In translating physicians' prescriptions in the British Pharmacopœia; in Pharmacy, Pharmaceutical Chemistry, and Materia Medica. *Fees*.—For a certificate of qualification to practise, six guineas, the half to be paid at the first examination; for an assistant's certificate, two guineas.

The Apothecaries' Hall of Ireland. *Professional Education and Examination*.—Every candidate for the licence to practise must produce certificates to the following effect:—1. Of having passed an examination in Arts, previously to entering on professional study. 2. Of being registered as a Student in Medicine. 3. Of being at least twenty-one years of age, and of good moral character. 4. Of apprenticeship to a qualified apothecary, or of having been engaged in Practical Pharmacy with an apothecary for three years subsequently to having passed the examination in Arts. 5. Of having spent four years in professional

study. 6. Of having attended the following courses—viz., Chemistry, during one winter session; Anatomy and Physiology, during two winter sessions; Demonstrations and Dissections, during two winter sessions; Botany and Natural History, during one summer session; Practical Pharmacy and Practical Chemistry (in a recognised laboratory), each during three months; Principles and Practice of Medicine, and Therapeutics, during one winter session; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised hospital (attendance upon twenty cases); Surgery, during one winter session; Medical Jurisprudence, during one summer session; instruction in the practice of Vaccination. 7. Of having attended at a recognised hospital or hospitals the Practice of Medicine and Clinical Lectures on Medicine during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery during one winter and one summer session. The examinations are divided into two parts. The first part comprehending Chemistry, Botany, Anatomy, Physiology, and Pharmacy; the second, Medicine, Therapeutics, Surgery, Pathology, Midwifery, Forensic Medicine, and Hygiene.

Candidates for the certificate of Assistant to an Apothecary in Ireland, in compounding and dispensing medicine, are examined in the British Pharmacopœia and in Pharmacy, scientific and practical, including the history, characters, and qualities of medicines, with their preparations and doses, and in the translation of Latin prescriptions. Neither the Arts' certificate nor the certificate of Apprentice is required for the examination of Assistant.

PHARMACEUTICAL EDUCATION.

It is proper to explain here the legal requirements as to pharmaceutical education.

By the Pharmacy Act, 1868, it was enacted that, "from and after the 31st day of December, 1868, it shall be unlawful for any person to sell or keep open shop for retailing, dispensing, or compounding poisons, or to assume or use the title 'Chemist and Druggist,' or Chemist or Druggist, or Pharmacist, or Dispensing Chemist, or Druggist, in any part of Great Britain, unless such person shall be a Pharmaceutical Chemist, or a Chemist and Druggist within the meaning of this Act, and be registered under this Act, and conform to such regulations as to the keeping, dispensing, and selling of such poisons as may from time to time be prescribed by the Pharmaceutical Society with the consent of the Privy Council."

All chemists in business on July 31, 1868, were admitted to the register, and assistants of 21 years of age or upwards, who had been such for at least three years, were admitted to the register by passing a "modified" examination. But for all other persons, and for every person henceforth it will be necessary to pass the following examinations before being registered, and consequently before being in possession of a legal right to commence business as a chemist and druggist:—

1st. The Preliminary Examination in which candidates are examined in Latin, English Grammar and Composition, Arithmetic, first four rules, simple and compound, and vulgar and decimal fractions. Fee two guineas.

2nd. The Minor Examination Candidates are examined in the reading and translation of Prescriptions, Practical Dispensing, Pharmacy, Materia Medica, Botany, and Chemistry. Fee three guineas.

Having passed the above the candidate is registered as a "chemist and druggist." It is then optional whether he will proceed to the

3rd. Or Major Examination. In this the same subjects of examination are presented, but a more extensive and scientific acquaintance with them is required. An interval of three months must elapse between the passing of the Minor and Major Examinations. The fee for the latter is five guineas.

Having passed the Major Examination the candidate is registered as a pharmaceutical chemist. Pharmaceutical chemists and chemists and druggists are both eligible for election as "members of the Pharmaceutical Society."

DENTISTRY.

The Royal College of Surgeons grants a diploma in dental surgery (L.D.S.) which may be taken apart from the Diploma of Member of the College of Surgeons. The preliminary examination is not stipulated for, but candidates must produce Certificates:—

1. Of being twenty-one years of age.
 2. Of having been engaged during four years in the acquirement of professional knowledge.
 3. Of having attended, at a School or Schools recognised by this College, not less than one of each of the following Courses of Lectures, delivered by Lecturers recognised by this College, namely:—Anatomy, Physiology, Surgery, Medicine, Chemistry, and Materia Medica.
 4. Of having attended a second Winter Course of Lectures on Anatomy, or a Course of not less than twenty Lectures on the anatomy of the Head and Neck, delivered by Lecturers recognised by this College.
 5. Of having performed Dissections at a recognised School during not less than nine months.
 6. Of having completed a course of Chemical Manipulation, under the superintendence of a Teacher or Lecturer recognised by this College.
 7. Of having attended, at a recognised Hospital or Hospitals in the United Kingdom, the Practice of Surgery and Clinical Lectures on Surgery during two Winter Sessions.
 8. Of having attended, at a recognised School, two Courses of Lectures upon each of the following subjects, viz.:—Dental Anatomy and Physiology (Human and Comparative), Dental Surgery; Dental Mechanics, and one Course of Lectures on Metallurgy, by Lecturers recognised by this College.
 9. Of having been engaged, during a period of not less than three years, in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a competent Practitioner.
 10. Of having attended at a recognised Dental Hospital, or in the Dental department of a recognised general Hospital, the Practice of Dental Surgery during the period of two years.
- N.B. The Students of the London Schools are required to register the above Certificates at this College; and special Returns will be required from the Provincial Schools.

EXAMINATION.

The examination is partly written and partly oral.

The written examination comprises General Anatomy and Physiology, and General Pathology and Surgery, with especial reference to the practice of the Dental Profession.

The oral practical examination comprises the several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, etc.

Members of the College, in the written examination, will only have to answer those questions set by the Section of the Board consisting of persons skilled in Dental Surgery; and in the oral examination will be examined only by that Section.

A Candidate whose qualifications shall be found insufficient will be referred back to his studies, and will not be admitted to re-examination within the period of six months, unless the Board shall otherwise determine.

Examinations will be held in January and June.

The fee for the Diploma is Ten Guineas, over and above any stamp duty.

EDUCATIONAL NOTICES.

WE have the pleasure to publish the following notices respecting pharmaceutical and medical education:—

The School of Pharmacy, Bloomsbury-square, will commence its Session on October 1; on Wednesday evening, October 2, at 8.30, the Sessional prizes and certificates will be distributed. Successful Candidates will be expected to attend. An address to the Students will be delivered by Mr. Stoddart, of Bristol. Ladies are invited to be present.

The North London School of Chemistry, Pharmacy, &c., conducted by Mr. J. C. Braithwaite, will re-open on October 1st.

The South London School of Chemistry and Pharmacy (principal, Dr. John Muter) commenced its session on the 9th inst.

At the two establishments just named gentlemen are prepared for the pharmaceutical examinations.

The Hereford Proprietary School (Head Master, the Rev. J. J. Lomax), at which especial attention is paid to pupils intended for the Pharmaceutical profession.

The College of Medicine, Newcastle-on-Tyne, will be opened on October 1st, when the Dean of Durham will distribute the medals, etc., and the Inaugural Address will be delivered by W. C. Arnison, M.D. At this college a pharmacy curriculum is provided, including courses of lectures on Botany, Chemistry, Materia Medica, and Pharmacy. The fee for either course separately is £4 4s., or £12 12s. composition fee for the whole curriculum.

The Manchester Chemists' and Druggists' Association has taken and furnished rooms at 37, Blackfriars-street, in that city, and announces several courses of lectures for the ensuing session on Pharmaceutical Chemistry, Materia Medica, and Botany, by Mr. L. Seibold, and on Pharmaceutical Latin by Mr. J. J. Smith, B.A. The annual meeting and supper will be held on October 4.

The Manchester Royal School of Medicine is incorporated with the Owens' College. The session will commence on Tuesday, October 1st.

The Winter Session of the University of Edinburgh commences on November 1st.

St. Bartholomew's Hospital Medical School opens on October 1st. There is no introductory address. A single payment of 100 guineas pays for all the lectures and the necessary hospital practice.

At University College the Faculty of Medicine opens its session on October 1st, with an introductory address by Mr. Christopher Heath, F.R.C.S., at 3 p.m. The total cost here is £105 15s. At University College School pupils are received not above sixteen years of age. The school session is divided into three terms, the next commencing on the 24th inst. Hours from 9.30 to 3.45, with one hour's interval. Fee, £7 per term, payable in advance. For boys between seven and nine different arrangements are made, and the fee is £6 3s. 6d.

The introductory address at Westminster Hospital Medical School will be delivered by Mr. Pearse at 3 p.m. on October 1st. At this school the entire course of study, including lectures and hospital practice, may be compounded for by an advance payment of £70.

The introductory address at St. Mary's will be delivered by A. T. Norton, Esq., at 3.30, on October 2. An advance sum of eighty guineas will pay for the entire course of instruction, including lectures and hospital practice. The entire course necessary for the dental diploma costs at this school fifty guineas.

Dr. J. C. Thorowgood will open the session of the Middlesex Hospital School on October, 1st at 3 p.m.; £90 is the total fee at this school.

Dr. J. D. Heaton will open the Leeds School of Medicine on October 1st., at 4 p.m.

The Bristol Medical School also opens on October 1st. This school is in connection with the Bristol Royal Infirmary and the Bristol General Hospital.

The Royal Veterinary College commences its session on October 1st, with an address by Professor Brown, at 1 p.m. Particulars will be found in our advertisement columns.

At the Hartley Institution, Southampton, arrangements are made expressly for the reception of pupils intended for a medical career, between the time of leaving school and of entering on the special professional curriculum. A fee of £20 in advance, pays for the academical year in this department of the Institution. There are also departments of General Literature and Science, and Medicinal and Technical Science.

The Lords of the Committee of Council on Education having decided to transfer the instruction in Physics, Chemistry, and Natural History from the Royal School of Mines in Jermyn-street, and the College of Chemistry in Oxford-street to the new buildings in Exhibition-road, South Kensington, the following courses are notified at the new address:—

Chemistry by Professor Frankland, D.C.L., F.R.S. Forty lectures on Inorganic Chemistry, commencing 21st October, 1872. Thirty lectures on Organic Chemistry, 13th January, 1873. Laboratory instruction, consisting of an elementary and an advanced course, commencing on 1st October. Fees:—Lectures on Inorganic Chemistry £4. Lectures on Organic

Chemistry £3, together £6. Laboratory instruction £12 for 3 months, £9 for 2 months, and £5 for 1 month.

Biology by Professor Huxley, LL.D., F.R.S. Eighty lectures on Biology (or Natural History, including Palæontology), with laboratory instruction, commencing the 7th of October, 1872. Fee for the full course, £10, for the lectures only £4, for the laboratory instruction £6.

Physics by Professor Frederick Guthrie. The course will consist of lectures, with laboratory work on the subject of the lectures, divided as follows:—twelve lectures on Molecular Physics, Sound, etc., commencing 24th February 1873: fifteen lectures on Heat, commencing on 24th March: fifteen lectures on Light, commencing on 12th April: twenty lectures on Electricity and Magnetism, commencing on 19th May. Each course will be complete in itself and may be taken separately.

Fee, £5 per course, including laboratory work: or £15 for all the courses. For the lectures alone, £1 per course.

At the Royal College of Science, Dublin, excellent opportunities of technical education are offered. Two scholarships, with £50 a-year each, become vacant each year at this college, and are bestowed on students who have been a year in the college.

These are all the notices which have been forwarded to us. For further information we must refer students to our advertisement pages.

EDUCATIONAL WORKS.

The following list embodies the principal works which are of utility to the Pharmaceutical Student:—

BOTANY.

TITLE.	AUTHOR.	PRICE.	PUBLISHER.
Botanical Terms, Dictionary of	Henslow	4/	Groombridge
Botanists' Companion	Balfour	2/6	Black
Botany, British Manual of	Babington	10/6	Van Voorst
Class-Book of	Balfour	21/	Black
Elementary	Oliver	4/6	Macmillan
"	Carruthers	1/	Cassell
Elementary Course of	Henfrey	12/6	Van Voorst
Elements of	Balfour	3/6	Black
First Book of	London	2/6	Bell & Daldy
Introduction to	Rennie	2/	Bohn
Manual of	Bentley	12/6	Churchill
"	Balfour	12/6	Black
Medical	Woodville & Hooker	109/	Bohn
Outlines of	Balfour	5/	Black
Rudiments of	Henfrey	3/6	Van Voorst
British Poisonous Plants	Sowerby	9/6	"
Student's Flora, British Isles	Hooker	10/6	Macmillan
Vegetable Physiology and Systematic Botany	Carpenter & Lankester	6/	Bohn
Vegetable Physiology	Lankester	1/	Cassell

CHEMISTRY.

TITLE.	AUTHOR.	PRICE.	PUBLISHER.
Analysis, Chemical, Commercial	Normandy	9/	Lockwood
Handbook of	"	"	"
Analysis, Chemical, Select Methods	Crookes	12/6	Longmans
" Qualitative	Fresenius	12/6	Churchill
" " Introduc. to	Fownes	2/	"
" Manual of	Galloway	8/6	"
" Quantitative	Fresenius	12/6	"
" Volumetric	Sutton	12/	"
Analytical Tables	Campbell-Brown	2/6	"
Chemical Manipulation	Williams	15/	Van Voorst
" Problems	Thorpe	1/	Macmillan
" Qualitative Analysis	Northcote & Church	10/6	Van Voorst
" Student, Lecture Notes for Frankland	"	4/	"
" Tables	Collenette	0/6	Baillière
" Technology	Wagner	25/	Churchill
" Theory	Wurtz	0/	Macmillan
Chemistry, Agricultural	Johnston	11/6	Blackwood
" " " "	Stockhardt	5/	Bohn
" Notes on	Groombridge	1/6	Educational Trading Co.
" Application to Arts and Manufactures	Richardson & Watts	126/	Baillière
" Dictionary of	Watts and others	143/	Longmans
" Elements of	Miller	60/	"
" " " "	Grubner	60/	Baillière
" Elementary	Barff	1/6	Cassell
" Elementary	Martyu Hart	3/6	"
" " " "	Roscoe	4/6	Macmillan
" First Step	Fownes	14/	Churchill
" Second Step	Galloway	6/6	"
" General, Medicinal, and Pharmaceutical	Atfield	12/6	Van Voorst

Chemistry, Inorganic	Eliot & Storer	10/6	Van Voorst
" of Common Life	Johnston	11/6	Blackwood
" Practical	Odling	7/6	Longmans
" Practical	Bowman & Bloxam	0/6	Churchill
" Practical Pharmaceutical	Wittstein and Darby	6/	"
" Principles of	Stockhardt	5/	Bohn
" Photographic	Hardwick	7/6	Churchill
" Inorganic and Organic	Bloxam	16/	"
" Medical	Bowman & Bloxam	6/6	"
" Notes for Students	Bernays	3/6	Groombridge
" Scientific, Introductory	Barff	4/	"
Laboratory Guide (Agricultural)	Church	5/6	Van Voorst
" Teaching	Bloxam	5/6	Churchill
" Text-Book	Valentin	10/6	"
" Lecture Notes for Chemical Student (Inorganic)	Frankland	4/	Van Voorst
" " (Organic)	"	5/	"

PHARMACY, ETC.

TITLE.	AUTHOR.	PRICE.	PUBLISHER.
Cyclopædia of Practical Receipts	Cooley	28/	Churchill
Druggists' General Receipt Book	Beasley	6/	"
Chemist and Druggist Guide to Trade	Series of Trades	1/	Houlston
First Lines for Chemists	Steggall	3/6	Churchill
Guide to the First and Second Examination	Smith	6/6	"
Materia Medica	Frazer	10/6	"
" " " "	Royle and Headland	12/6	"
" and Therapeutics	Wahllich	15/	"
" " " "	Pereira (abgd.)	21/	Longmans
" Pharmacology and Therapeutics	Scoresby-Jackson	12/6	Machlachlan and Stewart
Pharmaceutical Guide	Smith	6/6	Churchill
" Latin Grammar	Cooley	5/	Groombridge
Pharmacopœia, Companion to	Squire	10/6	Churchill
" Conspectus of	Thompson	6/	Longmans
" London Hospitals	Squire	5/	Churchill
" Prescriber's Analysis	Nevin	3/6	"
" Supplement to	Redwood	22/	"
" Veterinary	Tuson	7/	"
Pharmacy, Elements of	Lescher	7/6	"
Pocket Formulary	Beasley	6/	"
Poisons	Taylor	12/6	"
Practical Therapeutics, Manual of	Waring	12/6	"
Prescriptions, Book of	Beasley	6/	"
Selectæ e Præscriptis	Pereira	5/	"

MEDICINE, ETC.

TITLE.	AUTHOR.	PRICE.	PUBLISHER.
On Food	Letheby	5/	Baillière
The Microscope and its Revelations	Carpenter	12/6	Churchill
Dental Surgery	Tomes	12/6	"
Dental Anatomy and Surgery, Handbook of	Smith	4/6	"
Manual of the Practice of Medicine	Barlow	12/6	"
" Medical Diagnosis	Barclay	10/6	"
Students' Guide to Medical Diagnosis	Fenwick	6/6	"
Medical Vocabulary	Mayne	8/6	"
Elementary Course of Natural Philosophy	Wormell	4/	Groombridge

THE BRITISH ASSOCIATION.

(SPECIAL.)

THE scientific world was just smarting under the iron heel of despotism which her Majesty's First Commissioner of Works had placed upon it, when the call came to assemble at Brighton all the workers in laboratories, in strata, or in retired studies. Fashion and beauty smiled upon these students of organisms, although the right honourable member of Parliament for the Tower Hamlets alternately frowned and snarled. A glorious retribution! Mr. Ayrton is England's chosen superintendent of æsthetics, and he deals out insults and sarcasms to the representatives of science. Fashion and beauty concentrated at Brighton, disloyal to their legal lord, receive and entertain the same representatives, and science renews its youth. What a chance Mr. Ayrton missed of becoming the most popular man in Great Britain! Fancy, if he had gone to Brighton, and had had the manliness to make a speech of ten minutes' duration before that assemblage of scientific gentlemen, just to say that he had followed a mistaken course, and to offer his apologies for his unquestionable rudeness to Dr. Hooker, what a cheer would have greeted him, and would have re-echoed and resounded from end to end of this country! That is an occurrence which might have been, but was not. Mr. Ayrton is the loser, not we.

Many occurrences coincided to make the Brighton meeting of the British Association a specially successful one.

First and foremost was the presence of Mr. Stanley, in the moment of his highest popularity. Millions of Englishmen and Englishwomen would have gladly joined in a demonstration to pay him honour and respect; and they delegated the privilege to Brighton. Then too the presence of an ex-Emperor could not be ignored, while the support of an Empress, whose grace (in prosperity and courage in adversity) has equally won for her golden opinions, added to the *éclat*. The President was a true man of science, and his address has not been surpassed by any presidential oration since the Association has been inaugurated. While finally, it may, we think, be safely assumed that the public interest in scientific research augments year by year.

Before we proceed to a summary of this year's work of the Association, we may be allowed to comment for a moment on Dr. Carpenter's address. Rightly or wrongly, the President had somehow acquired a character as a very learned but somewhat arrogant man of science. His address on this occasion seemed to have been composed almost expressly with the intention of dispelling any such notion as the latter qualification. But not only that, Dr. Carpenter's metaphysics have raised us all, or at any rate most of us, a step higher, and we see a little further into the "possibilities of nature," as he happily expressed himself, than we did formerly. Science knows a good deal, but it does not know everything; and when it talks about "laws of the universe" which it has discovered, it should be remembered that the universe is rather larger than our science itself can understand. Professor Tyndall, the successor of the humble-minded Faraday, wants to bring every phase of our many-sided life to the test of such experiments as he can devise. When he can prove that the laws of the universe emanate from the Royal Institution, we shall be willing to submit our faith to his guidance. Until then we will rather believe with Dr. Carpenter, that when science, passing beyond its own limits, assumes to take the place of theology, and sets up its own conception of the order of nature, as a sufficient account of its cause, it is invading a province of thought to which it has no claim.

The addresses from the sectional presidents were up to the average, but we are not aware of a sufficient reason in glancing through them for departing from the alphabetical arrangement adopted by the Association itself.

In Section A (Mathematical and Physical Science) Dr. Warren De la Rue presided, and confined his address to astronomical photography. The application of photography to stellar science promises some beautiful results, especially as by this means more accurate observations can be taken. The eye may be defective, but the delineation given by the celestial bodies themselves must be correct. Preparations are now in active progress in England, France, Russia, and America for obtaining photographs of the transit of Venus in 1874. The object hoped for is to obtain a solar parallax, in order to determine with accuracy the sun's distance from the earth. These photographs are taken in the space of from the 50th to the 100th of a second, and micrometers will be employed to measure the distances indicated in the various photographs. Dr. De la Rue then proceeded at some length to point out the possible sources of error in the photoheliograph, and then summed up the results which had already been obtained by the application of photography to celestial observations.

In Section B (Chemistry), Dr. Gladstone gave the address, which was certainly hardly worthy of his own reputation, or of the quality of his audience. It was merely an essay, in which he showed how chemistry aided all the other sciences. He also echoed the complaint of Dr. Frankland as to the dearth of original investigation in this country, and strongly advocated the extension of science teaching and Government assistance.

Mr. Goodwin-Austin, as president of Section C (Geology), took for his text the Wealden formation, which is the peculiar feature of the South-east of England. This Wealden formation is the present manifestation of a series of freshwater lakes, which, in remote ages, spread from the southern parts of England to France, and even it is conjectured into Switzerland. The details of this address were purely technical.

In one department of Biology, Sir John Lubbock was president. He urged the extended study of natural science, and then proceeded to remark on the discussion which Mr.

Darwin's publications had called forth. It was astonishing how persistently Darwin's views had been misrepresented. For example, Browning in a recent poem has written—

"The mass man sprung from was a jelly lump
Once on a time; he kept an after course
Through fish, and insect, reptile, bird, and beast,
Till he attained to be an ape at last,
Or last but one."

Such notions as these Mr. Darwin would entirely repudiate. Whatever might be afterwards discovered, whether animated nature was derived from one ancestral source, or from a number of successive creations, the publication of the "Origin of Species" will not have less constituted an epoch in the history of biology. The president then showed by diagrams some striking resemblances between the embryos of the crustacea and infusoria, and concluded with some remarks anent Dr. Hooker.

Colonel Lane Fox commenced the business of another department of Biology (Anthropology) with a long and interesting essay on the origin of culture, referring particularly to the Australian savages, their weapons and habits. On this subject Colonel Fox is an authority. Dr. Carpenter, in commenting on this address, alluded to the flint implements found in the valley of the Somme, and said he thought that the man who discovered the method of polishing them was equal relatively to any inventor of modern times.

In the third department of Section D. (Anatomy and Physiology), Dr. Burdon Sanderson presided. His address was chiefly directed to the fact that the Germans had far surpassed us in physiological research, and he urged the popularisation of physiological education. Persons would probably take better care of themselves, and be less likely to be duped by quacks, if they understood the structure and functions of their own bodies.

Section E was Geography, and geography this year was the Aaron's rod which swallowed up all the other sections. The address of Captain Galton, the president, was on the subject of maps. He wishes to urge on Government the publication, first, of 1-inch scale Ordnance maps, on paper folded into a pocket form, to be sold at the head post-offices of the United Kingdom, seven hundred or thereabouts in number, each office keeping in stock the maps of the district in which it is situated; and secondly, of a reduced Ordnance map of the kingdom, on the scale of about five miles to an inch, to fulfil all the purposes of a road map, and to be sold throughout the country at the post-offices in the way just described.

Professor Fawcett, as president of Section F (Economic Science and Statistics), delivered a most practical and valuable address. According to general remark, and oft-repeated statistics, it would seem that this country is enjoying a period of unprecedented prosperity. But Professor Fawcett pointed out that this prosperity is accompanied with an extraordinary rise in the prices of almost all the necessities of life, a rise which he said was estimated by eminent authorities to have been not less than 40 or 50 per cent. since 1850. The process whereby the wealth of a country becomes distributed among all classes is a very gradual one, and there are many thousands of widows, spinsters, clerks, and others whose incomes are, and have been fixed in amount, and are, in consequence of this general rise in prices, practically reduced by perhaps a third. What comfort is it to tell one who is shivering from the cold that each advance in the price of coals means that £20,000 or £50,000 a year has been added to the income of some millionaire? Every one is not necessarily better off in times of great prosperity. Professor Fawcett believes that to some extent the rise in prices now experienced is due to the supplies of gold being in excess of commercial requirements. This decrease in the value of gold may continue, and in view of such a prospect it can hardly be wise to make such arrangements for the future as will merely ensure a fixed income. Then it was shown very forcibly how severely the income tax, and more especially the poor rates, press on that large class of persons with small fixed incomes; and, finally, Professor Fawcett strongly deprecated the universal interference of Parliament with private business matters.

The last Section, G (Mechanical Science), was opened by Mr. F. J. Bramwell, C.E., who delivered a very long and

most appropriate address on coal. His main object was to call attention to the means for economising coal in the various manufactures and mechanical operations for which it is employed. This was the longest address of any of the sectional ones, but it was a very useful one. The idea that we were wasting our coal, and that we might economise it, was so forcibly presented as to draw from Mr. Hawkshaw the humorous remark that it would be a good thing for the country if we were put on half-diet with fuel for a couple of years. At the end of that time we should be sadder, if not wiser men.

We have now got all the sections open, and in working order, and there for the present we must leave them. Next month we shall endeavour to make a few selections from the contributions to science which the Brighton meeting brought before us.

THE BRITISH PHARMACEUTICAL CONFERENCE.

THE proceedings at Brighton on August 13th and 14th were briefly reported in our last. As we then explained, the papers and discussion on pharmaceutical education, following the President's address, and introduced by Professor Attfield's paper, were allowed to occupy the whole of the first day's business. The second day was devoted to the reading and discussion of pharmaceutical papers. As the whole of the proceedings will be fully reported in the Year-book of Pharmacy, we shall content ourselves with presenting a very brief *résumé*. The President's address was unquestionably a very able and suggestive essay, but we confess it was hardly what we expected from Mr. Brady. That gentleman is one of our scientific *savans*, and while we have no wish to prescribe a fixed groove for these inaugural addresses, we may express our preference for such an one as he might easily have delivered, and to which former presidents have treated us. We are not all so well posted up in the scientific advance of our calling as not to need an annual stock-taking, put into good shape by an able mind. And, further, we shall regret it exceedingly, if the British Pharmaceutical Conference should ever drift into a mere roving appendage of the Pharmaceutical Society; a sort of strolling Bloomsbury-square. It has a character of its own to maintain, which should be developed rather than cramped, especially now that it is becoming such an influential association, attracting to its sessions eminent pharmacists, not of Great Britain only. The first day's proceedings at Brighton might have been with perfect appropriateness a decorous annual meeting at Bloomsbury-square; and we conceive that those who had the progress of pharmacy at heart were hardly gratified with the hurried four hours on the second day, which was all that was given to the proper functions of the Conference.

After Dr. Attfield's paper had been submitted several others were read. Mr. Julius Schweitzer opposed the principle of providing or even aiding provincial schools. He would make the major examination compulsory. The surplus income of the Society he would spend on the school at Bloomsbury, and would pay the officers and professors higher salaries, so that the best men might be retained. When there are more pupils than can be received, then, but not till then, establish another school, a long way from London, say at Edinburgh. Mr. B. S. Proctor advocated the requirement of a systematic course of study. Mr. S. R. Atkins suggested the abolition of the preliminary examination, and in its place the absolute necessity of the intending chemist taking the certificate of having passed one of the University middle class, or the College of Preceptor's examinations. Mr. Edward Smith regarded the preliminary examination as the corner-stone of our system of education, and would urge that its stringency should be gradually increased to the extent of including Euclid and Algebra, and Greek as well as Latin authors. Mr. John Mackay pointed out that Dr. Attfield had taken the aristocratic

view of the question, "apparently forgetting the hundreds, nay the thousands of those having the will, but lacking the power to take advantage of the teaching" which he would advocate. "With all our desire to become *Professionals* we still belong to *trade*;" and the inducements offered in the after life of the average chemist and druggist are not such as will yet bring a wealthier class of young men into our ranks. Mr. William Gilmour (Edinburgh) wrote that Dr. Attfield's proposals would never do for Scotland. There was no such thing as *public* cramming in Scotland, and no one ever could prevent *private* cramming; that is to say, the cramming which a student might give himself. The introduction of compulsory education he would oppose, because the business would not pay for such an education, and he would oppose such education being gratuitous, for he had always found a pauper education to be the worst possible. Mr. David Kemp (Portobello) agreed with Dr. Attfield in his scheme to make a certain term of study compulsory, but did not think it would be wise or right to provide it much below its fair value. Mr. Peter Squire agreed with Dr. Attfield's suggestions, "if cram does exist to the extent you say it does." The foregoing opinions were embodied in papers or letters; the following were presented personally:—Mr. Sandford appeared to advocate that the School of Pharmacy in London should be left to be self-supporting, but that the society might aid provincial schools. Mr. Sandford read an elaborate and ingenious paper, in order to promote this view. Mr. Hampson read a paper giving general observations on the present "crisis," referring to the want of success at Manchester owing to the absence of pupils, which he traced in turn to the apathy of the public and the profession in regard to pharmaceutical knowledge. Mr. Schacht adhered to his own scheme, which he advocated. That scheme was particularly drawn up to hinder "cram." But then every process short of a thorough systematic education might be described as more or less "cram;" even the establishment at Bloomsbury Square lent itself to the rapid acquirement of information. Mr. Stoddart urged the importance of demanding that the apprentice should pass the preliminary examination at the outset of his career. He would not start any school for the provinces, but if one was started he thought the Society might aid it if necessary. He recommended Mr. Schacht's scheme because it applied universally. Professor Markoe, of Boston, U. S., described some of the arrangements for pharmaceutical education in America. Mr. Haselden warmly defended the present examinations, and also the system of allowing candidates to pick up their knowledge wherever they liked. He argued that to compare the pharmaceutical examinations with those of the Colleges of Physicians and Surgeons which had been compulsory for nearly half a century was not reasonable. The conditions could not be the same. He agreed with any scheme which would aid young men to qualify, but it would be a failure if the Society should try to take the place of the parent in the first instance, and of the master in the second. Mr. M. Carteighe insisted on the desirability of stipulating that candidates for the minor should be at least 20 years of age, or preferably 21. "Candidates come up at the age of 16 or 17, deficient in practical knowledge, but full of cram." Professor Michael Foster gave some excellent practical advice to examiners. Mr. R. W. Giles advocated the establishment of one other school of pharmacy in North Britain, and also that advantage should be taken of the Government provisions for scientific education. Mr. Reynolds replied to Mr. Schacht's challenge to defend the scheme known as his (Mr. Reynolds') by remarking that the concentrated use of money would do greater good than its diffusion. Dr. Edwards, of Montreal, was the last speaker, and he gave some very practical hints. He did not value lecture certificates very highly; practical work in the laboratory was very much more to be desired. He also urged that candidates for the Major should be required to produce a "thesis" on some pharmaceutical subject, as in America. Book-keeping, too, might take a prominent place in the Preliminary, and would not be misplaced in the Minor.

It will be seen from this rapid glance that a sufficient variety of ideas has been offered to the Council for selection. Pharmaceutical education is a pet subject for discussion, and if kept open till the Greek Kalends will doubtless be productive of an abundance of brilliant talk.

Under the head of *Chemistry and Pharmacy* we are able to present abstracts of most of the papers read on the second day of the Conference. We shall be able to give abstracts of the remaining papers in a future issue.

The supper on August 13th, at which the Brighton pharmacutists entertained the Conference, was an elegant and very enjoyable one. Mr. W. D. Savage was in the chair, and the usual complimentary toasts were ably given and responded to.

Chemistry and Pharmacy.

ON CALABRIAN MANNA.

Abstract of paper read before the British Pharmaceutical Conference, August 14th, 1872, by DANIEL HANBURY, F.R.S.

THE author commences by pointing out that manna is commonly stated by writers on *Materia Medica* to be produced in Calabria and Sicily; that while there are good descriptions of the cultivation of the manna-ash, and of the method of collecting the product of the tree in Sicily, no modern account can be found relative to the production of the drug in Calabria. With regard to the latter region, he cites the remarks of Riedesel, a traveller in Calabria in the latter half of the last century, who states that manna is a considerable object of industry in that part of Italy.

The author then narrates his own observations and inquiries made during a visit to Calabria in May last. These resulted in ascertaining the fact that the collection of manna in Calabria has almost entirely ceased, and that the substance itself is scarcely remembered even by the pharmacists as a production of the country. In one district it appears that a trifling quantity is still gathered by the peasants, but it was generally said that incising the trunks of the tree (which is only found in a wild state) has been prohibited by the Government.

The author afterwards visited Sicily, but too early in the season to observe the collection of manna. After inspecting the tree in several localities, and examining herbarium specimens from all parts of the island, he expresses his conviction that *Fraxinus rotundifolia* can by no means be distinguished from *F. Ornus*, and that there exists no special cultivated form of the manna-ash.

TINCTURES AND WINES.

Abstract of a paper read before the British Pharmaceutical Conference, by W. W. STODDART, F.C.S., and R. L. TUCKER.

The authors read a very interesting and comprehensive paper on the best methods of preparing the tinctures and wines of the British Pharmacopœia. The table which accompanied the paper was too extensive for an abstract, so that we must refer our readers to the paper itself when published in the year book of the Conference. It contained the results of more than 800 analytical experiments, and arranged in columns,

1. The method of preparation.
2. The quantity per ounce of ingredients employed.
3. The sp. gr. of solvent.
4. The sp. gr. of tincture.
5. The total contents of tincture.
6. The percentage of ingredients dissolved.

Each tincture was made in three ways for the sake of comparison, viz., by maceration, by the Pharmacopœia formula, and by the method recommended by the authors.

Messrs. Stoddart and Tucker disapproved strongly of the old maceration process, which they found to be wasteful. The method which they found the best was by percolation, but omitting the usual packing process which has always been a source of perplexity and trouble. The ingredients are powdered rather coarsely, and in the manner described allowed to pack themselves; the result being uniform, easy, and with a minimum loss of spirit. The table showed that in many cases the tinctures prepared in this way were two or three per cent. stronger than those made by maceration or the Pharmacopœia process.

The authors strongly disapproved of all conical percolators, and gave many reasons why it is impossible for them to work satisfactorily.

The only form they recommended was a simple straight

cylinder without any diaphragm whatever, the end of the tube being only covered by muslin or cheese cloth.

The analysis of the tinctures as stated in the table were performed with the greatest care and most scrupulous accuracy. The specific gravity were ascertained by a Regnault's bottle and Mohr's hydrostatic balance. The measurements were not even trusted to an ordinary graduated measure, but were taken in a narrow glass tube graduated into $\frac{1}{100}$ th of a cubic inch. The evaporation was begun in a hot-air bath at 212° F., and finished in vacuo over sulphuric acid. It will, therefore, be evident that no trouble was spared in order to furnish as correct a table as possible for the purpose of comparison in future experiments that the authors intend pursuing in the same direction.

ON GUAIACOL.

Abstract of a paper read before the British Pharmaceutical Conference, August 14, 1872, by JOHN WILLIAMS, F.C.S.

Attention having been called recently to the fact that gum guaiacum, when subjected to destructive distillation, yielded creosote. Some was prepared by the following process:—

The gum was first heated in an open iron vessel until all moisture was driven off, then placed in an iron still, and distilled at a temperature gradually raised to low redness, and as long as any tarry matter came over. This gum was again subjected to distillation, and the light brown oily liquid produced. Treated with a solution of caustic soda, a portion only dissolved, the insoluble portion was rejected, and the alkaline solution subjected to distillation, by which means it yielded a quantity of light oil, which was rejected also; the oil, separated by means of an acid from the alkaline solution, was finally distilled several times, yielding as a final result a colourless oily liquid, heavier than water, and having a characteristic smell and other well known properties of creosote.

It commences to boil at 200° C., and soon to 210°, and finally to 215°; the larger portion—namely, eight-tenths, distill at 210°, which is the number given in text-books as the boiling point of pure creosote.

Guaiacol is perfectly insoluble in pure glycerine, thus agreeing with English creosote (of Messrs. Morson and Son's Manufacture), but differing from the German so-called beechwood creosote, which is soluble in glycerine.

It was found that the addition of say 50 per cent. of carbolic acid to guaiacol caused it to become soluble in glycerine.

A comparison was instituted between guaiacol, English creosote, German creosote, and also with pure carbolic acid.

Guaiacol, as already stated, commences to boil at 200°, rapidly rises to 210°, and does not go above 215°.

English creosote commences to boil at 100°, but almost directly rises to 213°, then to 216°, at which point a considerable portion comes over, then to 222°, and finally to 231°.

The German creosote commences to boil at 200°, gradually rises to 220°, but the main portion comes over between 203° and 210°.

Carbolic acid, when pure, boils steadily at 180°.

Attempts were made to demonstrate the presence of carbolic acid in the German creosote, as it had the property of dissolving in glycerine. Flückiger's tests (*Pharmaceutical Journal*, No. 103, page 1,008) was tried, but quite failed. Attempts were also made to separate the bodies by means of ammonia, but nothing definite could be arrived at by that means.

The products of the oxydation of the creosote were examined, but did not yield any more satisfactory results; also the sulpho conjugated acids were made, but carbolic acid and true creosote both yield acid so similar that no reliable test can in that way be obtained.

The result of the researches appear to prove that English creosote is a genuine product of wood tar. It is, however, not a homogeneous body, but probably consists of several isomeric substances. There is reason to suspect that German creosote may contain carbolic acid, but no positive proof could be obtained that such was the case, and in some respects it would appear to be a purer product than the English creosote, and in boiling-point, smell, and some other properties nearly identical with guaiacol.

The fact of German creosote dissolving in glycerine ought to be explained, either by proving that beech-wood creosote really possesses this property, or showing it has obtained it through some peculiarity in the mode of manufacture.

RESEARCHES ON THE CONSTITUENTS OF ALOES.

Abstract of paper read before the British Pharmaceutical Conference, August 14, 1872, by WILLIAM A. TILDEN, D.Sc. Lond.

PART I.

The object of the first part of the paper is to gather together some of the facts which have been recently established with reference to the composition of aloes.

In the opinion of the author all the different varieties of aloes may be represented as consisting of mixtures in various proportions of the following proximate constituents:—

1. A crystalline body and products of its decomposition or change.

2. Resinoid matter.

3. Accidental ingredients *c.g.*, gum, albumen, and salts.

The crystalline principle of Barbadoes aloes, now called *Barbaloin* ($C_{34}H_{36}O_{14}H_2O$), was originally isolated by Messrs. T. and H. Smith, and examined by Dr. Stenhouse. It is characterized by its comparatively ready solubility in alcohol, from which it crystallises in tufts of yellow prisms; by giving when moistened by strong nitric acid, a transient red colour; by furnishing with excess of bromine water, a yellow precipitate of bromaloin; and by giving by prolonged digestion with nitric acid a large quantity of chrysammic acid. The author has recently succeeded in obtaining from it a chloro-substitution derivative, ($C_{34}H_{30}Cl_6O_{14}H_2O$).

Nataloin was first obtained from Natal aloes by Professor Flückiger, and analysed by him. It is characterized by its crystalline form (rectangular plates) by its comparatively limited solubility, and by giving with nitric acid a blood-red colouration, which does not fade unless heat be applied; also by giving no definite homo-derivative and lastly by furnishing under the action of nitric acid, no chrysammic, but only picric in addition to oxalic acid. The formula for Nataloin given by the author, is $C_{25}H_{23}O_{11}$.

PART II.

By WILLIAM A. TILDEN and EDWARD RAMMELL (Bell scholar).

The experiments detailed in this second part of the paper were undertaken with the hope of throwing some light on the chemical constitution of the resin which forms a constituent of all the different varieties of aloes. Two kinds obtained respectively from Barbadoes and Socotrine aloes were operated upon.

The resin was exhausted by repeated boiling with distilled water acidified by a few drops of acetic acid; the solution was filtered through paper in a funnel surrounded by boiling water, and the filtrate acidified more strongly by the addition of hydrochloric acid and set aside. In a few hours the resin which had been deposited was collected, drained, and washed with cold water. In this way the original resin was separated into two portions, of which A was soluble in hot water, B insoluble. They were both finally dissolved in rectified spirit, the solution filtered and evaporated to dryness, and the residue kept at a temperature of about 220° F. till it has ceased to lose weight.

The resins thus purified were analysed by combustion in a stream of oxygen.

The percentages of carbon and hydrogen obtained in the analysis of the soluble portion A of the resin were as follows:—

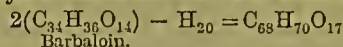
	Barb.	Barb.	Socot.
Carbon..	61.60	61.46	60.46
Hydrogen ..	5.65	5.42	5.69

A portion of the Barbadoes resin also furnished by the addition of excess of bromine water to its alcoholic solution a brominated compound containing 40.85 per cent. of bromine.

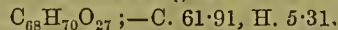
When the resin was heated with water in a sealed tube for some hours a portion of it was rendered permanently soluble. On evaporating the solution it could not be made crystalline in consequence of the presence of impurity; but excess of bromine water produced a precipitate which was crystallizable from spirit.

Further, when resin A was boiled with nitric acid, a large quantity of chrysammic acid was formed, together with picric and oxalic acids and carbonic anhydride. It yielded, in fact, the same products as are obtained from barbaloin under the same circumstances.

These experiments support the idea that that portion of the resinoid matter of aloes which is soluble in hot water is a kind of anhydride of aloin, standing in the same relationship to the crystalline substance that ether does to alcohol.



The formula to which this hypothesis leads requires percentages of carbon and hydrogen which closely approximate to the experimental numbers given above. Theory for



The insoluble portion, B, of the aloes resin was examined in the same manner as the foregoing. The analytical numbers obtained were somewhat less concordant, but the proportion of carbon seems to be slightly higher than in the soluble resin, A.

It is probably a body formed from crystallisable barbaloin by simultaneous condensation and loss of hydrogen in addition to the elements of water.

TINCT. FERRI PERCHLOR.

Abstract of paper read before the British Pharmaceutical Conference, August 14, 1872, by Mr. T. H. HUSTWICK.

The author commented on the difficulty of keeping the tincture, and rejected the plans suggested (a) of adding glycerine, (b) of employing less spirit, the first for obvious reasons, the second because that so long as any alcohol remains the tincture will be liable to decomposition. The spirit is useless inasmuch as the tincture is never prescribed for any therapeutic value attributed to the spirit. Acting on this view for the past two years he discarded the tincture, and has always employed the liquor in all prescriptions. He has never found this course make any appreciable difference in the mixtures. This communication was made partly with the view of eliciting an expression of opinion from other pharmacists, and partly in the hope of inducing medical men to prescribe an elegant preparation in the place of an inelegant one.

KAMALA.

Abstract of a paper read before the British Pharmaceutical Conference, by T. B. GROVES, F.C.S.

Mr. T. B. Groves's paper was an account of experiments directed to the clearing up of the doubts expressed by Leube and others as to the existence of the crystalline substance named by Anderson, its discoverer, Rottlerine. Mr. Groves proved satisfactorily the occurrence of this principle in a sample of kamala of good quality furnished by Mr. D. Hanbury, and moreover discovered the probable cause of the discrepant results arrived at by previous experimenters. He found that this substance, when exposed to the air for a few days, had its solubility much diminished, whilst its crystallizability was entirely lost.

SUCCUS SCAPI TARAXACI.

Abstract of a paper read before the British Pharmaceutical Conference, by Mr. H. BARTON.

Mr. H. Barton read a short paper on "Succus Scapi Taraxaci" (being notes extracted from Barton Brothers' working journal). Dissatisfied with the usual variable preparations of taraxacum, in 1862 he collected some flower stalks in full bloom, and expressed from them the juice; gratified with the result, the following year the experiment was resumed, *rejecting the flowers*, crushing only the stalks, and adding 25 per cent. of spirit; after some weeks the liquor was filtered from the very small deposit, the resulting preparation remaining bright, and retaining its characteristic taste. From that time to this the juice has been prepared much in the same way, with the exception that on one occasion the spirit was added, and the crushed stalks allowed to remain twenty-four hours before submitting it to pressure, but without any appreciable difference in taste or appearance. The memorandum for the present year gives a fair average produce, crushing 237 lbs. scapes or stalks, and 63 lbs. flower heads; from the former were obtained 123 lbs. 4 ozs. juice, and from the latter 24 lbs. 3 ozs. This last being inferior is kept separate. Judging from the remarks of medical men and others who have taken it, the author of the paper has reason to believe that succus scapi taraxaci (entirely rejecting the flowers) is certainly one of the best, most uniform, and readily obtainable preparations of taraxa-

cum, and one that can be kept for almost an indefinite period without changing.

KOEGOED.—A NEW DRUG FROM SOUTH AFRICA.

Abstract of a paper read before the British Pharmaceutical Conference, by Mr. G. A. KEYWORTH, Hastings.

Koegloed, pronounced Koukwood, grows wild in great abundance in Bushmanland, on the borders of Namaqualand, South Africa. The specimen exhibited was brought to England by Mr. C. J. Small, formerly residing in that neighbourhood. The termination "goed" means in Hottentot Dutch, wood, and the plant exists as a creeping root on the surface of the soil, there impregnated and whitened with nitrate of soda. Hence the plant has a salt taste. Neither leaf nor flower are observed. It is chewed by the natives as an alternative, but its chief use is as a condiment for cattle, chopped up and mixed with oats or other food, and as a remedy for inflammation of the stomach, which attacks mules and horses in Namaqualand, through drinking brackish water. A handful is boiled in a quart of water to a pint, and administered with half a teacupful of brandy. The effect is slightly purgative. The general properties of this root are described as slightly narcotic or sedative, and also of a somewhat stimulant, stomachic or carminative nature. Mr. B. J. Austin, Member of the Reading Microscopical Society reports as to the fibrous nature of the roots, the pitted ducts in the wood, and the thickened margin of the wood cells in the outer portions similar to what is seen in woody fibre of ginger.

ORRIS ROOT.

Abstract of paper read before the British Pharmaceutical Conference, Brighton, by HENRY GROVES, of Florence.

A small district round the city of Florence seems to be at present the chief, if not the only source of orris root. The plants yielding it are *Iris florentina*, *I. germanica*, *I. pallida*, and the scraped rhizome is the portion of the plant which occurs in the market as orris root. Large quantities of these roots are used by perfumers, for the purpose of blending with other essences, and it is also largely used for tooth powders, and for the composition of what is commonly known as violet powder. A discussion arose as to whether orris root contains any essential oil. Mr. Haseldeu stated that he had frequently endeavoured to obtain this oil by distillation, but had failed to do so. Mr. Umney, London, stated that he had distilled many tons of the root, and had obtained the essential oil in the form of a fatty substance, similar to cacao butter. This substance was yielded in very small quantity, and was even more costly than otto of roses; it possesses all the fine aroma of the original root.

ARTIFICIAL BUTTER.

The *Revue Hebdomadaire de Chimie Scientifique et Industrielle* of June 9th, gives a paper by Mège-Mouriez, "On Artificially-made Butter." Beef suet, cut small, is placed in water at 45° C. with carbonate of potash and fresh sheeps' stomachs, shredded into small slices. The fatty matter which separates and floats on the water is subjected to hydraulic pressure; this, mixed with some milk and water, is churned, and the butter obtained is washed, and, if required, melted. The authorities of the victualling department of the French Navy pronounce this to be an excellent substitute for butter, so no doubt we shall hear more of it.

ACTIVE HYDROGEN.

On the 19th of August, M. Dumas communicated to the Academy of Sciences of Paris the remarkable discovery made by M. Charbrier in the laboratory of M. Ch. Sainte-Claire Deville, that electrolyzed hydrogen would combine directly with nitrogen, and also decompose, at ordinary temperatures, the oxide of silver. If this production of active hydrogen, analogous in its properties to active oxygen or ozone, is confirmed, it points to new and important conditions in the physical state of matter.

NEW BLUE.

A new blue, approaching in beauty of colour that of ultramarine, has been introduced. Metallic antimony is dissolved in commercial nitric acid, and the solution filtered through powdered glass; to this is added a weak solution of the yellow prussiate of potash. The precipitated colour is then washed and dried.

VALERIAN.

In answer to a query of Mr. Hanbury's in the *Athenæum*, Mr. H. M. Duncan suggests that the name *Valerian* is derived from the Latin verb *Valeo-Valere* = to be strong or efficacious, i.e., in allusion to its strong odour, so attractive to the lower animals, especially cats; or because the ancients believed that the *Valeriana officinalis* was a very powerful medicinal agent. This derivation he considers more likely to be true than another which has been suggested, viz., that the 150 species of the Valerianæ were named after some botanist of the name of Valerius.

VIOLET RAYS AND VEGETATION.

General Pleasanton of Philadelphia (U.S.), has been remarkably successful in a curious experiment which he has made. He constructed a vine-house, not differing from conservatories generally, except that every eighth row of glass was of a violet colour. The vines have ever since borne remarkably fine fruit with such marvellous fecundity as amply to justify the inference that the chemical action of the light has had a great influence.

SALTPETRE.

In a French scientific journal, the Rev. F. Moigno declares that according to a low calculation, there is at Tamarugal alone, where the nitre beds extend over 483 square miles, a quantity of saltpetre equal to 63,000,000 tons, sufficient at the present rate of consumption for 1,393 years, while larger quantities of this salt are known to exist at the foot of the Cordilleras.

DETECTION OF TURMERIC IN MUSTARD.

In an article on the "Detection of Adulteration" in the *English Mechanic* of the 9th ult., Mr. A. H. Allen describes the following improved modification of the boracic acid test for turmeric:—"Shake half a teaspoonful of the mustard in the cold with two or three times its bulk of methylated spirits. Filter the solution, and evaporate the liquid to dryness at a steam heat in a porcelain basin, in which is placed a piece of filter-paper about the size of a penny. When all the alcohol has been driven off, moisten the paper with a strong aqueous solution of boracic acid, and again evaporate completely. In presence of turmeric the paper will acquire a reddish colour; but, as a further proof, drop on it some solution of caustic potash or soda, which will produce a very beautiful series of colours, in which green and purple are most evident. On then adding hydrochloric acid, a red colour will be produced, which can be again turned green and blue by addition of excess of alkali. The colours are very vivid and characteristic, pure mustard giving no such result. . . . Gamboge may be detected in the same way as turmeric, but gives a bright red instead of a green or blue colour on treatment with caustic soda, and on adding excess of hydrochloric acid the paper becomes merely yellow instead of the orange-red colour produced in presence of turmeric."

CHLORAL AND STRYCHNIA.

M. Rabuteau, at the sitting of the Société de Biologie (August 3rd), denied the alleged antagonism in the action of chloral and strychnine, asserted recently by M. Oré, which has been much discussed. His experiments lead him to opposite conclusions. Moreover, he considers that the experiments of M. Personne place it beyond doubt that chloral, administered in small doses, acts like chloroform administered in a continuous manner. In a large dose, there is a transformation of a part of the chloral; the other acts by its own properties. We have, then, to do with a poison which would add its effects to those of the strychnine, if the latter have been previously injected.

Medical Cleanings.

THE Brighton and Sussex Medical and Chirurgical Society hardly deserves the ignominy and abuse which have been heaped upon it, in consequence of an act of apparent rudeness to Mr. Stanley which occurred at the dinner given by this Society during the British Association week. Mr. Stanley is such a splendid young hero, and his achievement in finding Livingstone has won for him such an imperishable renown, that there is not the slightest necessity to flatter him. We do not therefore hesitate to quote the description of the circumstance which is given

by the *Lancet*, which conveys a far more accurate idea than to suppose that a deliberate insult was hurled at the distinguished guest. "The dinner," says this narrator, "was served soon after seven, and the speakers afterwards showed some tendency to be prolix. One, in particular, was so prolix, that the minds of the party wandered from him beyond recall, and men broke up into little knots, talking among themselves. The importance of this is only that the decorous habit of silent attention had been broken through before Mr. Stanley rose. When he did so it was near midnight. His speech commenced in a perfectly friendly way, but his rhetoric was of a florid character, and any who had never penetrated into desert regions would probably have described his gestures as redundant. To Englishmen, it was really droll to see and hear him, and somebody laughed. The fatal laugh chanced to follow a "point" of the speech—to fit into a pause in the oratory. It was like a spark on gunpowder, and was followed by the roar and the shock of the explosion. Launching a few angry phrases at the offender, the lion of the evening darted out of the room. The incident has been so misrepresented, and its importance so much exaggerated, that we have felt bound to place its naked triviality before our readers, as well as to assure them that the members of the profession at Brighton are wholly free from the blame that has been so freely imputed to them. The Medical Society gave a superb entertainment, and after an excellent dinner men are prone to laugh good-naturedly when they are amused."

Mr. F. C. Skey, C.B., F.R.S., died on the 15th August, at the ripe age of 73. Mr. Skey's signature was known to dispensers all over the country, and the high respect in which he was held, both by the profession and the public, renders it necessary to add a few lines to the bare chronicle of his death. He was a pupil of Abernethy, and retained a slight reflection of that celebrated surgeon's peculiarity of manner. With a slight bluntness, however, Mr. Skey combined rare geniality and a thoroughly gentlemanly manner. His activity was unsurpassed, a fact which is witnessed by the many public appointments which he held in conjunction with a most extensive practice. He has filled the offices of President of the College of Surgeons, Surgeon to St. Bartholomew's Hospital, Examiner of the College of Surgeons, Professor of Anatomy at St. Bartholomew's, Consulting Surgeon to the Charterhouse, and many others. He was Chairman of the Committee appointed by Government, from which emanated the Contagious Diseases Act; and received his title of C.B. for his services on that occasion. He was elected an F.R.S. for a paper on Muscular Fibre, which was published in the *Transactions of the Royal Society*, and was also the author of several works; notably, an important one on Operative Surgery, which he published when he was 60 years of age. He had some enemies, but many friends; and there can be none who would withhold from him the genuine respect which his useful life and manly character has so justly earned.

"It is a curious fact," says the *Philadelphia Medical and Surgical Reporter*, "and one well worth knowing, that the death-rate in Europe is nearly double what it is in the United States, averaging yearly one out of every forty-three inhabitants, while in America it is only one out of every eighty-one." The *British Medical Journal* quotes this absurd statement as if it believed it. If it were true it would either follow that the average life of Americans was nearly double that of Englishmen, or else that an exceptional number of Yankees lived to the decent old age of 150, or thereabouts. We cling to our well worn old fables about Thomas Parr and Henry Jenkins, but that is no reason why we should accept a new lot as well.

Several physicians in the *British Medical Journal* record instances of idiosyncrasy where asthmatic symptoms are induced by the smell of linseed meal. Ipocacuanha is a frequent cause of similar symptoms.

A correspondent of the *Lancet* gives the order of precedence of M.D.s of the various universities, such order depending on the dates of foundations of these universities. It runs thus:—Oxford, Cambridge, St. Andrews, Glasgow, Aberdeen, Edinburgh, Dublin, London, Durham, Queen's University in Ireland.

The Senatus Academicus of Edinburgh University has lodged a reclaiming note against Lord Gifford's judgment in favour of the lady students. This will at least have

the effect of delaying them on their road to legitimate degrees.

A writer in the *Chicago Medical Journal* thus elucidates the pathology of hysteria:—

"The more common form of hysteria is that in which the erethism of the emotional centres has effected those of ideation—the same sequence of events absorbed in most regularly progressive insanities—and the other symptoms are joined with wrong mental action, distorted conception of things, and the patient comes to have a fixed delusion."

Our "ideation" is not equal to the assimilation of this crude definition. We decline the task of interpretation, lest our "wrong mental action" might involve us in a "distorted conception of things," and ultimately in "progressive insanities."

We scarcely pick up the smallest fragment of printed paper just now, but what we meet with the following paragraph:

The University of Munich, at its recent 400th anniversary, conferred upon Mr. Simon, the Medical Officer to the Privy Council, the honorary diploma of Doctor of Medicine, "propter præclarissimam de sanitatē publicā tuendā atque augendā meritā."

Is this such a very great honour?

The inhabitants of Iceland are said to be quite free from consumption, but the charm would seem to be broken from a sentence in a letter which Dr. Horace Dobell has published from an Icelander in this country, to whom he wrote asking for a detailed statement of the diet of the inhabitants. The following is the reply:—

"The population of Iceland may be divided, as regards diet, into two classes: the first class consists of clergymen, merchants, magistrates, doctors, and a few of the well-to-do farmers; the second class consists of farmers, labourers, and servants. *Breakfast*.—Gruel made of milk and water, with rye or barley, dried codfish or cold mutton, butter and bread. During the summer and spring, the breakfast often consists of fresh fish, such as codfish, soles, salmon, or trout, afterwards either gruel or coffee; and some places eggs, especially eider-ducks' eggs. *Dinner*.—Nine months in the year, salt mutton and barley-broth three or four times per week. During the remaining three months—viz., September, October, and November—fresh mutton with turnips. In the autumn, every farmer slaughters a number of his sheep, which he salts down in casks for consumption. This salt mutton is, as a rule, so salt that it has to be steeped in cold water twenty-four hours before it is boiled, and even then it produces scurvy and other diseases of the skin and blood, which is quite natural from the great want of vegetables. The other three or four days of the week the dinner consists of dry codfish, rye bread and butter, sometimes cold salt mutton or fresh fish, where it can be procured. This meal is always finished by coffee. *Supper* is, as a rule, very light, consisting generally of gruel made from barley or rye, mixed with milk and water. Where milk cannot be procured (which is often the case, especially among the poorer classes who live on the sea-coast), coffee is generally the substitute. It is not an easy matter to enter into all details, for in some places the poorer classes are reduced to great hardships as regards food, especially in the spring, before ships arrive from abroad. A great many then eat young seals, also parts of the whale, which is called in the Icelandic *rangi*, and is, as a rule, a very favourite dish. In winter time, many have to substitute tallow for butter, and in some cases raw oil, both seal and cod-liver oil. Amongst the poor farmers, a family consisting of seven or eight persons will live on nothing else but the milk from one or two cows, a few dried codfish, and perhaps a small quantity of rye, not tasting either bread or butter, coffee or sugar, for months; even the flesh of sharks has been eaten by the poor people, when driven to do so by hunger; and from that cause I have heard that leprosy still exists in a few cases. At all the fishing stations round the coast, where people principally depend upon the sea, fish is the staple article for food both for breakfast, dinner, and supper; and, when rye-meal gruel is not added, coffee will follow. In many places, coffee is drunk four times a day.—Thorlakur O. Johnsen." Mr. Johnsen adds in a postscript: "I have just had a letter from a friend of mine in Reykjonik, stating that a young man in the Latin school, about 21 years of age, is dying from consumption."

THE MONTH

THE session of the British Pharmaceutical Conference at Brighton, on August 12th and 13th, was chiefly characterised by the educational discussion which took place. It was hoped that a general expression of opinion would aid the Council in arriving at a satisfactory conclusion, as to the best means of promoting pharmaceutical education. The Council may have experienced some perplexity in its efforts to fuse into an harmonious plan the wisdom of its multitude of counsellors. The second day of the meeting was devoted to the reading of pharmaceutical papers. The meetings were held in a splendid room in the Pavilion, and the hearty exertions of the Brighton chemists made the gathering a most enjoyable one.

The British Association commenced its session on August 4, under the presidency of Dr. W. B. Carpenter. The inaugural address was a masterpiece of logic and eloquence. The presence of Mr. Stanley, and his spirited descriptions of his journey to Uji added immensely to the popular interest in the British Association. The two or three miserable attempts to detract from the brilliance of his achievement are hardly worth raking up for record. As President of the chemical section Dr. Gladstone delivered an address, the production of which must have involved but very slight labour.

The next meeting of the British Association will be held at Bradford, on September 19th, 1873, under the presidency of Dr. James P. Joule, LL D., D.C.L., F.R.S. Belfast was elected for 1874.

The meeting of the American Pharmaceutical Association was fixed to commence on the 3rd instant, at Cleveland, Ohio. A further reference to it will be found in the letter of our New York correspondent, who will report the proceedings expressly for this journal. We expect to publish an account in our next issue.

The French Association met at Bordeaux from the 5th to the 13th September.

A Swedish Expedition, under Professor Nordenskjöld, left Tromsø, in the north of Norway, on the 21st ult., *en route* for the North Pole. There are twenty-two persons in all, with a lot of reindeer and all necessaries.

The International Statistical Congress has met in St. Petersburg, and has been handsomely treated by the Russian Government. There were 114 foreign members, who were provided with lodgings free at the best hotels, and had free railway tickets to anywhere in Russia. One is tempted to inquire what the International Statistical Congress is.

The International Exhibition at South Kensington will close on the last day of this month. It contains the most splendid and instructive collection of machinery connected with the art of printing and the manufacture of stationery ever brought together. In all respects it is superior to its immediate predecessor, except that Her Majesty's Commissioners, assisted by Messrs. Spicers and Pond, show a growing tendency to convert it into a huge tavern.

It is time to remind our manufacturers of the Vienna Exhibition which will be opened next May, and will be one of the largest yet held. A correspondent at Vienna writes that English perfumery especially has a great reputation in Austria, and that this opportunity of pushing the trade should not be neglected. British exhibitors must make arrangements with the English Commission, at 41, Parliament-street W. Secretary, Mr. Phillip Cunliff Owen.

Professor Gardner has appropriately commenced a lecture at the Royal Polytechnic, entitled "Coal, and How to Save it." The professor has well acquired the talent of presenting scientific truths in a popular manner.

Professor Odling, the eminent chemist, was married, on August 20th, to the daughter of Alfred Smee, F.R.S., the author of "My Garden."

The Licensing Act has come into operation, and whatever may be thought of it in the provinces, respectable Londoners will not willingly lose it. Silently but suddenly it has swept away from our streets a vast mass of vice and debauchery, which formerly held high revel during that one last hour. This splendid revolution has been effected with the slightest possible inconvenience to the community.

There are at this time four chemical laboratories in Japan, where the science is taught, three of them being presided over by Germans, and the fourth by an American. The chief one is at Osaka, where there are nearly 100 students. The rest are at Kaga, Shidzoka, and Fukuvi. A fifth will soon be opened at Jeddo. The students are said to be fairly intelligent, but their minds are at present encumbered with astrology and other kinds of spurious philosophy.

Mr. John Bingley, chemist, of Northampton, was lately elected revising assessor, to fill up the vacancy caused by the death of Mr. William Thomas Higgins.

Mrs. Acton, the wife of a Worcester chemist and druggist, was standing near the fire with a benzoline lamp in her hand, on the 26th ult., when the muslin dress she was wearing became ignited, and she was soon enveloped in flames. The injuries she received have since proved fatal.

The Correctional Tribunal of Paris has condemned to a year's imprisonment a man named Louis Jourdan, described as a chemical student, for having written a letter to Prince Bismarck threatening him with death if he did not send him a sum of 40,000*fr.*

On the 24th of September the International Congress of Weights and Measures will meet in Paris, in the Conservatoire des Arts et Métiers.

The death is announced of Mr. George Coble, chemist, of Great Yarmouth. The deceased had been in business nearly twenty years, and was much respected by his fellow-townsmen.

Messrs. Goodall, Backhouse, and Co., of Leeds, sold during August the large number of 4,688 gross, or 672,192 bottles, of their well-known "Yorkshire Relish."

Petroleum has been discovered in Prussian Silesia, and much excitement exists there in consequence. If the report be true, and the yield is found to be abundant, the effect on the American oil trade will be disastrous, for Germany is the greatest consumer of American oil of any of the European countries.

Messrs. Robertson, Cook, Johnson, and Co., manufacturing chemists, carrying on business at the Imperial Works, Bromley-by-Bow, have petitioned under the liquidation clauses, and the Court of Bankruptcy, upon the application of Mr. Lee, has appointed Mr. R. A. McLean, accountant, Lothbury, as receiver of the estate, and granted an interim injunction restraining further proceedings in various actions. The liabilities are estimated at under £9,000, and the amount of the assets is not yet ascertained.

Mr. Davis, Chemist, of St. Leonards-on-Sea, has retired from business, and is succeeded by Mr. Hasselby, St. Leonards.

Mr. Morris, Chemist, of Lowestoft, having gone to America, he is succeeded by Mr. Riches.

THE ADULTERATION ACT AND THE VINEGAR TRADE.—We call the attention of our readers to the salutary warning contained in our advertising columns of this issue, relative to the sale of adulterated vinegar. It has long been the practice of some unscrupulous persons to give a fictitious strength to their articles by the use of vitriol. This practice will in future render the vendor liable to a penalty of £20 for each offence. We have the assurance of Messrs. Thompson, Berry, and Co., that their vinegars and British wines are unadulterated.



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J. ALFRED WANKLYN, M.R.C.S., London,
Formerly Professor of Chemistry in the London Institution;
Joint Author of a Book on Water Analysis, and of the Aramonia Process.

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PHARMACEUTICAL LECTURESHIPS.

WE threw out a suggestion last month respecting the appointment of pharmaceutical lectureships to which we asked the attention of those most interested in the cause of the advance of pharmacy in this country. We now intend to advocate our idea with a little more elaboration. Several eminent pharmacutists have encouraged us by privately expressing approval of the notion, and we think it is at least worthy to enter into competition with the other more ambitious schemes now before the Pharmaceutical Council.

We need hardly recapitulate the present position of affairs. But to explain ourselves clearly, we must be allowed to point out that there exists in the provinces a strong feeling that the parent Society should do something to aid the cause of pharmacy elsewhere than in London alone. This demand is acknowledged to be fair, and it is decided that some course shall be undertaken as soon as one can be provided, which shall be satisfactory to those who ask for it, and not calculated to lower the standard of education which has been already set up. There are also two other considerations which must be borne in mind. One is that the magnitude of the scheme must be in proportion to the means of the Society, and the second is that a tolerably even justice must be dealt out to all parts of the country. At the utmost, the Pharmaceutical Society has not more than £2,000 per annum to spend, and there is a danger that by frittering this sum away in driblets, it might produce only disgust and tantalization. No portion of it is to be spent on any proposal which savours in any degree of cringing, nor must it be in any sense a charitable donation. There is the problem, now for its solution.

We have no space to analyse the various schemes which have been laid before the pharmaceutical body by various gentlemen who have considered the subject. Opinions halt at present between the schemes known respectively as Mr. Reynolds' and Mr. Schacht's. The former would subsidize a certain number of provincial schools, the latter follows the Government plan (science and art department), and proposes to pay for results. The difficulty of making either of these schemes practically successful lies in this; that whatever individuals may say or believe to the contrary, it is quite manifest that all that the majority of the assistants and apprentices want is not as much education as they can

get, but just as little as they can do with. We are not surprised that this result should occur, nor do we think it a matter to be angry about. But it is a consideration which should call forth still more the onergics of those who strive so disinterestedly for the elevation of pharmacy, and it seems to us the strongest reason which can be assigned for some decided action on the part of the Pharmaceutical Society.

In his recent address at Brighton, Mr. Brady took this high ground, and advocated the appropriation of a certain portion of the Society's funds to the cause of education in these words:—

I cannot regard with any satisfaction the large unused balance of income which the Pharmaceutical Society has of recent years annually funded. The day has gone by for laying up talents in napkins. Beyond an investment sufficient to guarantee the means of carrying out the examining and governing functions entrusted to the Society by Government—a limit long since passed—there can be no excuse for the accumulation of wealth. These constantly recurring investments under our present circumstances represent good left undone—opportunities unaccepted. Nor in this hoarding of money instead of science is the Pharmaceutical Society true to the spirit of its founders. The Society was formed to do in a collective capacity what could not be done by individuals.

These thoughts carry force to the minds of those who can hardly bring themselves to perceive the desirability of offering any aid to men who ought to be well able to help themselves. Mr. Brady shows that it is for the good of pharmacy as a trade and as a profession that some such enterprise should be commenced, seeing that the means exist. Further on he again urges that “the Pharmaceutical Society has means enough at its disposal; surely it would be better that its pride should rest on constant investments in science and intellectual wealth than in the perpetually swelling assets of its annual balance-sheet.”

In the same highly suggestive address we find a hint thrown out that it would be advantageous for pharmacy if a few young men could be tempted from the ranks every year to pursue scientific culture to a higher degree. This idea is worth bearing in mind. Those who could or would be suited for such pursuits must always be scarce, but the few would leaven the whole mass. The *trade* of a chemist and druggist must always continue, and the commercial side of our occupation is not to be interfered with; but the most mercenary of us could never complain of such a means whereby the dignity of our position would be so evidently improved. If, then, we can propose a plan, which in these Pharmaceutical Lectureships we do propose, whereby the two objects sought for will be attained, we think it must be at least worthy of consideration.

To put the matter in a concrete form, let us assume that the Society has £2,000 per annum to spend. We suggest that, say six young men, who shall have passed the Major Examination with honours, or at least creditably, and who shall be suitable in other respects, shall be offered, perhaps, £250 a year each for three years to accept these pharmaceutical lectureships. Two should be lecturers on Chemistry, two on Botany, and two on Materia Medica. These six gentlemen could, in the course of a year, by spending three months each in a district, cover eight districts. Each district at this reckoning would get three courses of lectures each lasting for three months, and fairly covering the field of pharmacy. There might be a stipulation that any town desirous of obtaining such a course must be willing to provide at least a lecture-room, if not specimens and apparatus, or the latter might be provided by the Society with the other £500 in hand. We would not prohibit these lecturers from undertaking certain other work if opportunity occurred; but it is to be assumed that as a rule they would be studious young men, and would reflect honour on the science which they professed. If a district should be assumed to comprehend three towns, each town to receive

one lecture a week, and reckoning nine months in the year for work, it follows that not less than 648 lectures on the sciences on which pharmacy is based, would be delivered in Great Britain during each year. It is hardly possible to conceive any system which could be kept more thoroughly clear from the taint of that “hideous usurper” Cram. Such a system could be readily extended or contracted to meet the varying incomes of the society; the provinces would get all they could legitimately ask for, and without in the slightest degree “pauperising” those who benefited by the aid thus given. It is almost certain that wherever such a course of lectures should be given, the cause of pharmacy would be stimulated and elevated for many years to come. We shall not further allude to the collateral advantages which might result to pharmacy by the possession of a distinct, if limited, class of pharmacists; men who would be none the worse for a little out-door exercise, that is to say, outside the doors of the laboratory and college.

We have no wish to steal Thor's hammer. The suggestion comes from Jötunheim it is true, but Asgard should be too lofty to care for the origin if the proposal is worth a thought.

OUR YOUTH AND OUR EXAMINERS.

HOWEVER terrible may be the Charybdis, which, we are told, is soon to engulf society in its capacious vortex, there is some consolation in knowing that we are not drifting to destruction blindfold. And if in the multitude of counsellors there is safety, we shall, for our own part, be very speedily at rest, from fear of any impending danger. Such being the case, we are content to view with a considerable amount of equanimity, the vigorous attempt of Professor Attfield, at the Brighton Conference, to demonstrate, by a series of explosive arguments, the early collapse of pharmacy, pharmacists, and pharmaceutical education. We need hardly say that we have honestly endeavoured to digest the enormous assertions and three-cornered arguments which appear to form the vertebrae of Dr. Attfield's remarkable paper. But despite every effort, our intellectual system has resolutely refused to assimilate such extraordinary pabulum. It was unfortunate that such strictures should have emanated from this particular source, a fact of which their writer became himself conscious as he prefaced his remarks by a written apology and explanation.

Let us, however, do full justice to our author, and fairly test his theories propounded at Brighton, with the evidence adduced in their support in the clear light of established facts. Only by so doing can we hope to get rid of the disagreeable impression which every reader of the address must experience, to wit, that pharmacy is in a dire state of degradation, and that its students are the most unprincipled, mercenary individuals existent.

“What,” asks Dr. Attfield, “has the Pharmacy Act of 1868 done for compulsory education? Nothing—emphatically nothing; worse than nothing. It has degraded voluntary education from its previous promising position; it has reduced its value by one-half.” These are strong words, and, if true, inexpressibly saddening. Some have toiled long and earnestly for the advancement of pharmacy. They have borne the burden and heat of the day, when the work was great and the labourers few. *Finis coronavit opus*, however. The goal of their ambition was reached, the Pharmacy Act was passed, and recognition by Government obtained. Here, then, was the nucleus from which all the higher forms of pharmaceutical progress were to be developed. Alas for such bright anticipations! Four

years only have elapsed since its enactment, when the principal of our School of Pharmacy solemnly pronounces the Act to be an egregious failure, productive, in fact, of far more harm than good.

We now beg the reader's careful attention whilst we again turn to Dr. Attfield's paper, to read:—

"Prior to 1868, the average period of study of each pupil in the laboratory of your national school of pharmacy was from four to five full months, each student working daily from eight or nine o'clock till five. Since 1868 it has been a little over two months. Till 1868 the Professor of Practical Chemistry in the School succeeded in teaching all students chemistry. After 1868 the majority have shown disinclination to learn anything beyond certain facts regarding 'the definite chemical bodies of the Pharmacopœia.' Class examinations of all candidates for the 'Minor' and 'Major' were instituted, the Professor taking upon himself the office filled at medical schools by the tutor; but as soon as it was found that these examinations covered the whole area of pharmaceutical chemistry, then the men who most needed them, those who only wanted to learn what was required for the 'Minor,' contrived to keep away."

Now, in the first place, we beg to take exception to the Professor's statement that immediately upon the passing of the Pharmacy Act the average attendance of pupils in the laboratory was suddenly reduced from five to two months; for we find that during the Session 1868-69 (which was directly subsequent to the Act), the average attendance exceeded five months (*Pharm. Journ.* 2. xi., 267).

Unfortunately, we possess no statistics of the attendance during the past three sessions. But will Dr. Attfield vouchsafe us an explanation of the astonishing contrast exhibited between the above dismal recital of the failings and sins of his post—1868 pupils, and the following quotation from his own report, presented at the inaugural meeting of the Session 1871-72:—

"Professor Attfield said that he had nothing but good to report of the class of practical chemistry. To say this much was really to speak in high terms of praise of the students. For whereas his colleagues and teachers of lecture-classes generally could certify to the bodily presence and outward behaviour of their pupils, and to the amount of knowledge possessed by a certain proportion at the end of the session, he and teachers of laboratory classes generally could testify not only in these respects, but from daily and hourly observation to the degree of ability and zeal displayed by every student. During the past year they have lived and laboured in the laboratory on the most perfect terms of harmony with each other. He himself, as well as his assistants Dr. Tilden and Mr. Moss, had at all times found the students most ready to receive direct and indirect instruction, and willing, nay, anxious, to submit to periodical examination. Instruction had been thus stimulated by examination, and examination by instruction; and the product had been, they trusted, a commensurate amount of education. During the past session the entries in the practical class had reached 113, a higher number than that of any previous session. When the school was instituted there was no laboratory class, the only method of instruction being that of lectures. Afterwards, means of prosecuting the study of chemistry by practical manipulation were provided, and ten gentlemen entered. In four years the numbers had risen to thirty, afterwards approaching, and last year exceeding, the numbers attending lectures. Such a result, he thought, must be gratifying to those pioneers in pharmaceutical education who had striven to place this, the most thorough and effective method of learning chemistry at the disposal of students."—*Pharm. Journ.* 3, II., 289."

We leave the reader to reconcile as best he may the Professor's *couleur de rose* report with the miserable picture drawn in his Brighton address.

Let us turn to our critic's comment on the examinations. We gather first from Dr. Attfield that the "Minor" has been grievously diluted—of that he is quite sure, and, in consequence, he is much afflicted. But this degraded and deteriorated "Minor" is the stumbling-block which his students so frequently fail to pass. Reasoning by inference, we are compelled to ask, is it not time to inquire into the state of Denmark?

We gather next that the examiners are an excellent body of men—not Davys, nor Faradays, nor yet distinguished lecturers—yet for all that, not a word is to be said against them. We ourselves should have anticipated a sentence of anathema; but instead, we hear with comfort that each examiner, like Brutus, is an honourable man, and thoroughly competent to discharge the duties of his office.

This is solemn nonsense. Let Professor Attfield anoint "our excellent examiners" with any amount of literary unction, it is, after all, they who are the Achans in the camp.

What! shall we be told that they have no power to frustrate the crammer? Are our examiners so accustomed to *exam themselves* that they cannot in a whole year collect enough "information" to enable them to so vary their questions on each of the twelve examination days, as to effectually mar the success of a "crib?" Will it be maintained that the fields of botany and chemistry are so narrow and circumscribed, that an examiner in them cannot put a safe distance between Brown, Jones, and Robinson. Take the Pharmacopœia. Why, a competent examiner could so ring the changes upon the "definite chemical bodies" alone, as to utterly discomfit the unlucky wight who relied upon any amount of previous questions. And in prescriptions and practical dispensing there seems absolutely no limit to the play which an able examiner could give to the application of his tests.

Now for one moment let us plunge into that seething mass of vituperation with which the Professor baptizes "that hideous usurper, Cram." "With regard to this cramming or 'coaching,' it is a fact," he says, "that during the past ten months more students have been crammed than have been legitimately prepared for the Minor Examination of the Pharmaceutical Society of Great Britain." What a revelation! Here we have it stated, upon the authority of an eminent and responsible Professor in the Society's School of Pharmacy, that in less than one year more than 112 students* have been *illegitimately* (mark the word) prepared for the Minor Examination, and have consequently obtained registration as chemists and druggists *by fraudulent means*. But then comes the question, Is Dr. Attfield's statement correct? or rather, what does he wish us to understand by the phrase "more students have been crammed than have been legitimately prepared?" To this we will reply by asking, How is it possible for Professor Attfield to assert that such and such a percentage of students were crammed; nay, we will put the question closer and ask, Can he declare that *one* student had not "legitimately prepared" himself for examination? If he succeeded in satisfying half-a-dozen different examiners in as many different subjects, is it likely he would afterwards come to Dr. Attfield and say, "I am an ignoramus; I know nothing whatever of chemistry or botany; I have been only crammed by Dr. So-and-so with these few questions and answer?" The idea is absurd. For, as we pointed out last month, the young men who seek the aid of a "crammer" are not *ignoranti*; but simply those who, having had fair experience in practical pharmacy, want some "professional" to coach them up in as small a modicum of theory as will suffice to carry them through the "Minor." No! We have faith in the ability and conscientiousness of the examiners, and had we no further proof of their watchfulness and zeal, we should find our satisfaction in the wholesome percentage of candidates sent back every month without a certificate. We have faith too in the youth of pharmacy, and assert that these are not to be judged of by those poor specimens that exist in every walk of life; that specially haunt every lecture-room, and distress every honest teacher. Men of mark are to be found amongst us, of whom each pharmacist is proud—men who, far from neglecting their daily occupations, who let business claim their first attention—yet, nevertheless, are sincere lovers of varied scientific research; some, no mean expositors of its truths. We do not believe the race has died out. Such men have been, such are, and such will be hereafter, or the British Pharmaceutical Conference might tremble for its existence.

* The number of students who passed the Minor Examination between October, 1871, and July, 1872, was 224.

To sum up, whilst gladly offering our thanks to Dr. Attfield for many parts of his paper, notably for the succinct collection of interesting facts in the Society's history, we cannot see that he has made out a case either against the Pharmacy Act or pharmacy students. We have frankly accepted his invitation for "criticism," and have freely expressed our objections to his views, feeling that however much we respect him for his scientific attainments and professional reputation, he has signally failed in effecting a solution of the vexed question of "Pharmaceutical Education."

JOHN CARGILL BROUGH.

EARLY on Saturday morning, September 7, at the lovely little village of Esher, John Cargill Brough entered into his rest, aged 38. A gentler spirit and a braver heart never breathed. The end was not unexpected, for his life of suffering for some months past was visibly on the decline, and when on the preceding Sunday the prayer was raised, "And we most humbly beseech Thee of Thy goodness, O Lord, to comfort and succour all them, who in this transitory life are in trouble, sorrow, need, sickness or any other adversity," it was not without imminent foreboding that shortly we might add: "And we also bless Thy holy name for all Thy servants departed this life in Thy faith and fear."

Shall we seek to analyse the secret of that personal fascination which was his gift, and to explain the mystery of his varied friendship? Perhaps the shadow of constant illness borne with unbroken cheerfulness inspired a certain mixed feeling of compassion and esteem; possibly his very weakness lent an added grace to that delicate wit many of us so well remember. His influence, however, had a deeper spring, partly derived from his considerate allowance for the views of others and their wishes, and his abundant sympathy with their pursuits; partly also that to this happy mental constitution was joined extreme refinement and intellectual culture. Where and when or how he gained his knowledge we really cannot say; nothing would more surprise those who had seen Mr. Brough only under his 'social aspect to discover the amount of solid learning he possessed. He was an indefatigable reader blessed with a retentive memory and the order of his mind was strictly mathematical. The study and practice of mathematics formed his relaxation, to which was owing the clearness of his abstract writing. Still the large heart with its large allowance for everybody and everything was the attraction, and it was this that made his home the centre of such widely different people. Angles were wanting in his character, and he spread round him an atmosphere in which quarrels could not exist. He was universally called Jack. The Archbishop of Canterbury in a consecration service would have called him Jack, and so would the Pope of Rome, and both would have loved him. Yet Brough the editor, the chemist, and the writer was a very different man from Brough in the character of Charles Lamb.

In the threefold departments mentioned, his diligence was only equalled by his success. Think of a man whom no Insurance office would accept, to whom Time gave no credit, having been editor of the CHEMIST AND DRUGGIST, editor of the *Laboratory*, sub-editor of *Nature*, editor of the *Ironmonger*, and the first elected editor of the Year Book, being at the same time reporter of scientific lectures, and general contributor to the press. Is it wonderful that he too rapidly broke down, that his last arrangements consisted in the constant refusal of work offered, or that in his own words "I had to abandon many things, and *Nature*, to preserve my life?"

His editorial skill has been described already in this journal. He was intolerant of sentences that ran about, of thoughts repeated, and of paragraphs with more words than sense—he was not insensible to the art of construction, and carefully watched over the style, as well as the matter of his contributors. Nor must we forget to mention that he was the prince of letter writers; none will doubt that. The distinctive charm of his welcome communications was certainly that they were steeped in allusions to, or quotations from English literature. That several of his eminent authors said what they least intended—that his men and women were led into curious lines of conduct, hundreds of his readers are well aware. Throughout there was the amusement and constant excitement of surprise, and there was a freshness, sparkle, and we think genius, in describing common events in an original manner. We have a strong opinion about these letters, which no one is asked to share until he has read them for himself. We are persuaded that in them, may be found passages which for grace and gaiety are not unworthy of Elia, and which for delicate thought and pathos Hood would not have disdained. Here is an amusing specimen—

"ON THE DANGERS OF EARLY RISING.

"Not to be a-bed after midnight is to be up betimes."—SIR TOBY BELCH.

"At what precise minute that little fiery musician [the lark] doffs his night gear, and prepares to tune up his unseasonable matins, we are not naturalists enough to determine. But for a mere human gentleman—that has no orchestra business to call him from his warm bed to such preposterous exercises—we take ten, or half of ten (cleven of course, during this Christmas solstice), to be the very earliest hour at which he can begin to think of abandoning his pillow. To think of it, we say; for to do it in earnest requires another half hour's good consideration."—CHARLES LAMB.

"'Tis the voice of the sluggard he justly complains
On rising betimes, he's a fool for his pains."—WATTS'S DICTIONARY.

"I should as soon think of getting between damp sheets or of taking up my quarters in a newly-plastered house, as of turning out before the world is dry and comfortable; save on Dame Nature's regular washing days, when one cannot escape the misery and danger of damp surroundings. With me the advantage of early rising is never mist, for I scorn to rob any tree or herb of its dew. If I say that I enjoy the early morn you may be sure I lie. Dare to talk to me about the early bird, and I will paint you a repulsive picture with the early worm, the early slug, and the early black-beetle in the foreground. I am not healthy, therefore I lie a-bed; I am not wealthy, but I should be poor indeed were I to waste the blessed night in sleep; I admit I am not wise, but I am not such a fool as to get up at an unreasonable hour. The old proverb wants mending: it should read—

"Early to bed and early to rise
Takes a man healthy and wealthy to prize."

"Think what early rising has brought you to! There is softening of the brain in every line of your last letter. Give up the habit I beseech you and join the sluggards. Dr. Guthrie, who read a paper at the 'Chemical' last night on 'Graphic Formulæ,' must be an early riser. An hour between the sheets, spent in thought, would have prevented him making an attempt to introduce another system of symbolic formulæ. No! getting up early is, if possible, worse than going to bed early. Men get up early when they are about to be hanged—and I'll be hanged if I follow their example.

"J. C. B.

"2 a.m., 18. iv., 1868."

He drew his illustrations from the stage, before and behind the curtain—from the artist world and from the printing office—from the world of literature—from books grave and gay—Artemus Ward and Milton—Browning, Tennyson, and Dickens. The Chemical Society served him in good stead; so did the Savage Club, and so did every mortal circumstance to be found in the streets of London.

But give us John Cargill in his serious mood, and we could afford to resign the rest. Let him describe the termi-

JOSEPH INCE.

CONDUCTED BY RICHARD J. MOSS, F.C.S.

ANSWERS.

	<i>Marks awarded for Analyses.</i>						Total.
F. J. Bond (<i>1st prize</i>)	90
A. J. P. (<i>2nd prize</i>)	85
B. P.	82
H. Hippenley	80
W. J. J. S.	68
E. L. C.	65
J. H. Matthews	55
C. St. Clair	45
A. F.	30
Graduation excelsior	25
Edina	20

TO CORRESPONDENTS.

* All Communications should include the names and addresses of the writers; those which reach us after the fifteenth day of the month succeeding that in which the questions appear will be disregarded.

A. J. P.—You should endeavour to carry out your analysis in a more systematic way, remembering that it is not merely necessary to show that certain substances are present, but also that all others are absent. An important element of success in chemical analysis, and all scientific inquiries is, caution in accepting conclusions. Your English is less creditable than your chemistry.

H. Hipsley.—The examination for acids should be described; they are not less important than the metals. We hope to have your name on our next list.

E. L. C.—You theorize on the cause of the presence of sodium chloride. It would be better to prove in the first place that it was present. You may have satisfied yourself on this point, but we require to be satisfied too, and you will find us very slow to believe.

A. F.—You do not say that ammonia was added in excess before adding ammonium sulphide; if it was, the production of such a precipitate as you describe is quite inexplicable; in fact, we cannot imagine how you dispose of such a large quantity of calcium phosphate, for if it escaped precipitation it should have been found in the residue.

Edina.—The analysis appears to have given you very little trouble. We can imagine you doing the whole thing in ten minutes or so. Finding that a little of the powder imparted an acid reaction to water, you at once prove to your satisfaction, that oxalic acid is present. The hydrochloric acid solution gives an orange red precipitate, with hydrogen monosulphide, of course this was due to antimony alone. Then you found that the filtrate gave a precipitate with ammonia—this must be due to aluminium. A portion of the original substance appears to be insoluble in acids—silica, beyond doubt. Fortunately for science this style of inquiry is beneath its recognition. Your investigations in order to be successful must be pursued on an entirely different principle. If you can convert that readiness to accept conclusions with which you are so abundantly gifted, into scientific scepticism—bring your mental powers to bear on any scientific question with doubt in the van and belief in the rear,—you shall have a much better chance of arriving at the truth of the matter.

J. Heron.—In our May number, under the title of "Sch. 2. C. C." you may learn the fate of your paper. We understood you to select this *nom de plume*.

THE CHICAGO FUND.

WITH the following correspondence we complete our record of the interesting interchange of courtesies between the Pharmacists of the United Kingdom and of Chicago:—

London, 17, Bloomsbury-square, July 11th, 1872.

TO THE MEMBERS OF THE COUNCIL OF THE CHICAGO COLLEGE OF PHARMACY.

Mr. President and Gentlemen,—Your appeal through Professor Ebert to British pharmacists for aid in replacing the library, lecture-specimens, and apparatus of your college, destroyed by the great fire of October 8 and 9, 1871, has met with a warm response. No sooner were your terrible losses made known, than the leading pharmacists of the country formed themselves into a committee for carrying out your wishes. To indicate how general was the sympathy felt by your fellow pharmacists in England, I may state that on this committee were the officers of the Pharmaceutical Society of Great Britain and of the British Pharmaceutical Conference, including Members of Council, Professors and Examiners; the Presidents of the eighteen provincial pharmaceutical associations; most of the wholesale and several of the chief retail druggists; and representatives from Scotland and Ireland. As a result, contributions, both in money and kind, flowed freely in, and were acknowledged through the courtesy of the proprietors and editors of the *Pharmaceutical Journal* and *CHEMIST AND DRUGGIST*. The announcements in these journals have been brought under your notice from month to month up to May of the present year, when you will have observed that the list of donors was closed, and an intimation made to the effect, that after such books had been purchased as would, with those already presented, form a tolerably complete library of English works, the wishes of your council would be consulted respecting the disposal of the balance. From a letter dated Chicago, May 20, 1872, I found that all chemical and Galenical specimens would be presented to you by American manufacturers, that glassware and other containing vessels would be provided by yourselves, and that German books would be sent to you from Germany; but that chemical and physical apparatus of any kind would be acceptable. I have therefore, as treasurer and secretary of our fund, and with the consent of the committee, made purchases as follows:—

First.—Such modern and other standard works on chemistry, botany, pharmacy, and *Materia Medica* as were not already presented. The catalogues of the leading public libraries and of the chief booksellers have been consulted

with the view of making this set of English books as complete as possible. A box of books from Paris, chiefly from the library of Dr. Soubeiran, is included. I thought you would like to have a collection of the latest editions of foreign Pharmacopœias. All the other books are British.

Second.—Optical Apparatus: a full-sized binocular microscope, with object-glasses, polariscope, and other extra fittings; a microscope, a large 2-prism spectroscope, condensing lenses, prisms, skeleton telescope, &c.; large polariscope.

Third.—Electric Apparatus: a large induction coil, electric lamp and camera, a 40-celled battery, an 18-inch plate electrical machine, an electrometer, Leyden jars, electrophorus, and several smaller articles, a galvanometer, model of electric telegraph.

Fourth.—Heat: A double-cone thermo-pile, a pair of 12-inch parabolic reflectors, thermometers, apparatus for conversion and radiation, air-bath, water-bath or oven, apparatus for evaporation in vacuo, Liebig's condensers, hygrometer, expansion bar and gauge, lamps, furnaces, etc.

Fifth.—An air-pump, apparatus for ringing a bell in vacuo, Magdeburg hemispheres, apparatus for ascertaining weight of air, a pneumatic syringe, a pair of bar magnets, magnetic needles, an electro magnet, a magneto-electric machine, a strong working model of the hydraulic press, models of crystal hydrometers and specific-gravity bottles.

Sixth.—Chemical Apparatus: Oertling's lead chemical balance and weights in grammes and grains; platinum dish and cover, crucible and cover, and spatulas; a gas combustion furnace, a gas muffle and metal-fusing furnace, a blow-pipe table and burner, a pair of copper gas-holders, agate mortar, cork-forcers, brushes, tongs, blowpipes, platinum wires and foils, and such apparatus, retort-stands and tripods, porcelain and earthen crucibles, retorts, flasks, retort-stands, clumps, evaporating basins, glass funnels, beakers, glass receivers for air-pump, glass tubing, glass-rod, caoutchouc stoppers, filters and case, table supports, a pneumatic trough, pipettes (graduated), C. C. measures, potash bulbs, spirit-lamps, set of gas-burners, etc.

All these goods have been delivered, or are in course of manufacture, with such modifications as will better fit them for your purposes. I hope they will be completed within the next two or three weeks. They will be packed in tin-lined cases, and addressed to the College, under care of Professor Ebert. You will be duly advised as to the contents of each. They will be in your hands early in September, when, from what you tell me, I presume your rooms will be ready for their reception.

I ought to add that the manufacturers and dealers in the goods have, under the circumstances, granted liberal reductions from their list prices. I understand, also, that the very heavy Customs' duties on such articles will not be demanded. We congratulate ourselves that thus the money value of our present when safely housed in Chicago will be about five thousand dollars.

I still have in hand between three and four hundred dollars. This sum I propose to retain until October or November, when I shall be able to forward some books that are now reprinting (such as Arnott's "Physics," Cooley's "Cyclopædia of Receipts," etc.), others that are difficult to obtain (as some of the Continental Pharmacopœias, a set of the *Chemical News*, Bunsen's "Geometry," etc.), and send any new works. I shall also thus have an opportunity of replacing any articles that have become broken or damaged in transit, and of sending you any books, apparatus, or specimens not already in your hands, but which are obtainable in this country.

I notice that specimens illustrative of Botany and *Materia Medica* you propose to obtain in the United States as far as possible. Some others you will find among our contributions. Additional articles I shall be happy to obtain for you on receiving from you a list of those required.

I think I have now completed my story. I have told it somewhat in detail in order that you might know what to expect from the old country; and thus be able to order goods and fittings not included in our present, but which may be indispensable for the successful reopening of the College in October.

In conclusion, I would say on behalf of my fellow-members of Committee, and in the name of the contributors generally, that although we deeply regretted the necessity

of organizing a plan by which to aid in raising the Chicago College of Pharmacy from its ashes, we heartily and gladly did our best in the face of such an obvious duty. We are happy in the thought that we have been successful in doing for others what we believe others, had there been occasion, would have done for us. Accept our present as an earnest of our sympathy and brotherly love.

I have the honour to be,

Mr. President and Gentlemen,

Yours most faithfully,

JOHN ATTFIELD.

CHICAGO, ILLINOIS, UNITED STATES,
August 17, 1872.

Treasurer and Secretary of the Chicago College Fund.

Sir,—We have the honour to acknowledge the receipt of your letter of July 11th, announcing the result of the subscription which has been contributed by British Pharmacists, and now so generously presented to the Chicago College of Pharmacy.

As officers and trustees of the College we have observed from time to time the great efforts and the untiring zeal our friends in England and elsewhere have manifested in the endeavour to aid us in re-establishing our College, so the receipt of your communication was not an absolute surprise; but, sir, the perusal of the letter, showing, as it does, the extent of the donation, the peculiar care and judgment that have been exercised in its selection, and the large number of contributors, comprising not only pharmacists and scientists, but even their assistants and apprentices, from every part of Great Britain and Ireland, combine to excite in us feelings of profound amazement and gratitude.

May we hope, sir, that all who have contributed to this Fund will believe that we duly value and appreciate the sacrifices they have made for us, and all be pleased to receive, in the name of the Chicago College of Pharmacy, our sincere acknowledgments and thanks; although we would not have one contributor feel that we under-estimated the service he had rendered us, we should think our duty incomplete did we not specially thank you, sir, the various members of Committees, and all who took the initiatory steps in this matter; you have indeed cause for congratulation that such marked success should have attended your efforts.

We accept your munificent gift as a valued trust, to be carefully and sacredly administered for the benefit of all who shall seek improvement within the walls of our College. We hope to hand it down to our successors complete and unimpaired, except as time and good usage shall cause them to decay; and when the student, as he seeks or follows the inspiration of knowledge now dwelling upon the page of lettered science, or holding, with unpractised hand, the instrument that shall unfold wonders to his full, eager mind, he, and all, shall know that these aids to knowledge were placed within his reach by brother pharmacists of Great Britain and Ireland, and given in the holy names of sympathy and brotherly love.

Reciprocating these sentiments

We have the honour to remain, sir,

Your obedient servants,

GEORGE BUCK, President,
formerly M.P.S.G.B.

T. H. PATTERSON, 1st Vice-President.

JAS. W. MILL, 2nd Vice-President.

ALBERT E. EBERT, *Corr. Secretary.*



OIL OF EUCALYPTUS.

WE have received from Messrs. Felton, Grimwade, and Co., of Melbourne, through their agents here, Messrs. Grimwade, Ridley, and Co., a sample of the essential Oil of Eucalyptus, which they are now exporting to England, and which is likely to take a prominent position, if not in our Materia Medica, at any rate in certain of the arts.

The Eucalypti are the well-known gum trees of Australia, and are often remarkable for their extraordinary height, sometimes reaching 200 feet. A sort of kino is obtained from one species, Australian manna is yielded by another, and an essential oil may be obtained from the leaves of several. The sample that we have is distilled from the leaves of *Amygdalina odorata*. It has a peculiar aromatic odour, and a warm spicy flavour. Lately its properties have been investigated with some care. Dr. Grimbart (in France) has found it to have a soothing effect, having experimented with it on himself. In moderate doses it diminished the vascular tension, and thereby induced sleep. It is also antispasmodic, and possibly antiasthmatic. For external application it has proved extremely useful, where a stimulating application is required, such as rheumatism. It will probably make a good chilblain liniment. For horses it is an excellent rubefacient. A common kind of the oil is used for dissolving gums, a small proportion of the oil being mixed with methylated spirits, whereby the solvent properties of the spirit are considerably augmented. Lastly, it is coming into use by perfumers, for aromatising soaps, and it is said to be especially adapted to this purpose, on account of the readiness with which it yields its own identity on the addition of the more costly otto in consonance with it, such as roses and orange flowers. There is little doubt that it will become an article of extensive commerce, as we believe it is to be had at a cheap price, and will probably be cheaper as the demand for it extends. Dr. Müller, the Government botanist of Victoria, has given great attention to this oil, and thinks that a large colonial industry will be developed. We may also mention a trial made by M. Duquesnel of the effect of the Eucalyptol in masking the disagreeable flavour and odour of cod-liver oil, and the result, he says, has been most satisfactory. He mixes one hundred parts of cod-liver oil with one part of the essence of eucalyptol. The oil thus aromatized, he states, has neither the taste nor odour of cod-liver oil; it is readily swallowed, and leaves in the mouth or on the tongue only the flavour of the essence with which it is mixed: and the disagreeable eructations which follow the taking of the pure oil are completely modified. The aromatic oil may be kept for a long time if the bottle in which it is placed be maintained very closely stoppered.

GARD'S PLATE CLOTHS.

THE cloths introduced by Messrs. Gard and Co., of Breaston, Derby, for cleaning plate are, we fancy, rather a resuscitation than a novelty. We have some dim idea that our grandmothers used to boil cloths with hartshorn shavings for the purpose of getting a soft rubber for plate. Somewhat in this method we presume Messrs. Gard prepare their "Chemical Plate Cloths." They are very neatly put up, answer the purpose perfectly, and are sure to be saleable.

When one is used up as a plate-cloth, it can be employed as a duster. A shilling box contains three of these cloths.

THE CROWN PERFUMERY COMPANY.

THIS new firm is coming into the market with considerable spirit, and will take its place alongside the best of our manufacturers. The utmost taste is displayed in the style in which all their articles are got up, and we are compelled to express the highest commendation of the samples of soaps and perfumery from this company which we have seen. The competition in the wholesale perfumery trade is very severe, for there is a great deal of talent engaged in it; but the Crown Company will make a location.

CONCENTRATED WRITING FLUIDS.

MR. JOHN GRANGER, of Birmingham, is introducing concentrated writing fluids in various colours, a few drops of which in an inkstandful of water produce a very good ink. They are evidently founded on aniline, but the convenience is obvious.

Literary Notes.

MESSRS. LONGMANS have lately published a very small work entitled "Magnetism and Deviation of the Compass," expressly intended for students of navigation. The author is Dr. John Merrifield, the head master of the Plymouth Navigation School. We notice it here to mention our appreciation of the admirably clear manner in which the facts known concerning magnetism, are presented to the reader or student.

Mr. Herbert, of Charterhouse-buildings, has produced a splendid specimen of the fine art of advertising. His book is entitled London, and with a succinct account of the metropolis, accompanied with many steel engravings, we have a guide to the business firms. The book is handsomely bound, and each page is illuminated in colours. The book is supplied to the saloons of our Ocean steamers, and is intended to be a guide to Americans and other foreigners visiting this country.

With pleasure we acknowledge the arrival of two volumes, being the Annual Reports of the Smithsonian Institution, (Washington, U.S.), for 1869-70. This important institution may not be well-known to some of our readers, but it occupies a prominent position in America. In the earlier half of this century, a gentleman named Smithson, bequeathed half a million dollars for the foundation of an institution at Washington, to bear his name, the object of which should be the "increase and diffusion of knowledge among men." The United States' Government is *ex officio* in the position of trustee, but the bequest is for the benefit of all mankind. The managers of this institution have now an annual income reaching nearly 50,000 dollars, and are located in an imposing structure. As far as we can gather from the reports before us, the intentions of the founder are carried out as wisely and liberally as the funds will permit. By aiding scientific investigation, by collecting scientific works, by the formation of a splendid library and museum, and by continual intercourse with associations for the promotion of knowledge all over the world, this institution is performing no mean work. The annual reports which call forth these remarks, are other proofs of the efforts made by the managers to carry out the conditions of their existence. Along with the reports are bound up in each volume many of the important contributions to knowledge which the passing year may have placed on record, many of these articles being specially translated from French or German sources. These volumes are distributed to libraries all over the world, and thus at least, it may be said that channels for the distribution of knowledge are opened. One sometimes fancies that already we have in existence knowledge enough of one kind or another, at least a million times more than any mind can master. But when once the day comes that there is no desire for further requirements, when once for a single hour we see a cessation of intellectual activity, then may we look upon our race as doomed. We believe in infinite progression, and in infinite development, and so apparently did Mr. Smithson. We trust that the institution which bears his name will continue to share in that progression and development, so long at least as it continues to aid the wide world in its efforts to march onwards.

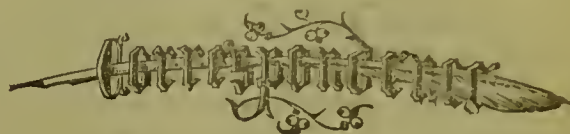
A Chinese newspaper has entered on its two thousandth volume; but it has lost all its original subscribers.

We understand that the fourth edition of Attfield's "Chemistry" is now passing through the press, and will be published this month. Another edition will also be published shortly in Philadelphia, adapted to the new United States' Pharmacopœia, which is daily expected.

The "First Principles of Human Physiology" (London: Kempster and Co.) is an excellent little shilling manual on a subject not overdone with instruction books. The author is Mr. W. T. Pilster, a certificated teacher, and we think he

puts his instruction in very good form. It is evidently based on Huxley, and is none the worse for that. It is very fairly illustrated, and conveys a good idea both of anatomy and of the functions and actions of the bodily organs.

TERENCE IMPROVED.—The *Pharmaceutical Journal*, commenting on the discussion of Pharmaceutical Education at Brighton, approvingly mentions that it was truly said by one speaker *Quot homines tot opiniones*. The editor then adds, unconscious of the humour of his remark, "This lends weight to the opinion that the question of Provincial Pharmaceutical Education is not yet ripe for settlement." It does indeed. Leaders of educational movements should quote correctly, or leave classical matters alone. Terence wrote *Quot homines tot sententie*, and his remark will be as applicable ten years hence as it is now, and is therefore not at all appropriate to the present discussion.



PHARMACEUTICAL LECTURESHIPS.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—A copy of your "suggestions to the Pharmaceutical Council" on the question of provincial education having been sent to me, I beg to say that it accords more nearly with my opinions than any other which I remember to have seen. I have repeatedly expressed my opinion that almost the only way in which the Council of the Society could assist was by promoting arrangements between pupils and teachers. It is not the duty of the Pharmaceutical Society to provide the expenses needful for educating the rising generation of chemists. If it were, the question would not be whether their surplus income was sufficient for the purpose, but how much they should be taxed in the discharge of their duty. The Colleges of Physicians and Surgeons are not expected to pay for the teaching of the rising generation of doctors. Still less is it the duty of the members of the Pharmaceutical Society to pay for the education of the apprentices in a few of the large towns. But whenever persons are willing to pay for education, the Pharmaceutical Council may well lend their aid to organize it.

The difficulty, so far as my personal observation extends, has not been to find teachers but to find pupils. And this not because of high fees; on the contrary, the fees have been ridiculously small, and the teachers have been of undoubted ability. I suppose the necessity has not yet been felt; when it is, I am sure that, as far as Liverpool is concerned, no pecuniary help is wanted from the Society. Supposing that the large towns were helped to form schools,—say that in Liverpool, Manchester, Preston, Bolton, and Blackburn, schools were sustained by the aid of the Society, how would the members in Ormskirk, in Prescott, in St. Helen's, in Warrington, and in a host of smaller places like these, to pay for them?

There is no lack of chemists yet, and there is no need that the Pharmaceutical Society should furnish a forcing house. I doubt whether there is ever any industrious young man who cannot obtain all that he needs.

I am, Sir,

Your obedient servant,

JOHN ABRAHAM.

Liverpool, Sept. 9.

[We have received also several other letters, more or less approving our suggestion of Pharmaceutical Lectureships, but we are not aware that we are at liberty to publish them.—Ed. C. & D.]

CONFERENCE DINNERS.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—There have been from time to time amongst the executive of the Pharmaceutical Conference an expression of dissatisfaction with their local friends for giving a free entertainment to their *confrères*, who assemble on such occasions from all parts of the kingdom. Indeed, so strong

was this feeling manifested at the meeting held at the Pavilion on Monday evening, the 12th of August, that a resolution, condemnatory of the practice, was about to be submitted, when a plea of the unseemliness of doing so on the eve of such an entertainment prevailed with something like an understanding that such a resolution would be subsequently submitted for adoption. Having now had experience, I feel called upon, in justice, to give an opinion adverse to that entertained by the executive of the Council. If the Brighton Local Committee had not given the entertainment on Tuesday evening as they did, the only opportunity of a social meeting would have been lost. It may be recollected that an announcement was made to the effect that if means and opportunity permitted, the local committee would have a picnic to the Devil's Dyke. The means at the disposal of the committee were ample, but the opportunity was wanting. The reasons assigned for opposing entertainments are, that some towns, knowing what expensive arrangements have been made at some places, may be deterred from encountering a similar outlay. All that I can say is, let every town act independently, and cut their garment according to their cloth. Once in, perhaps, twenty years, is surely no great tax on a large town such as the B. A. and Conference invariably select. The chemists of that town ought to be allowed to please themselves about inviting their friends to meet them at a social gathering. Many men would gladly subscribe to a public entertainment, who would shrink from offering private hospitality. Reasons for such a course will readily suggest themselves, without entering into detail. It has been said, have social gatherings if you like, but everyone should pay for what he has. This view may be entertained by some, but it was not that of the Brighton Local Committee; and the result of the gathering may safely be left in other hands; at any rate, it was very satisfactory to the local committee and to yours respectfully,

W. D. SAVAGE.

TEACHERS OF PHARMACY.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—I feel it my duty to reply to Dr. Attfield's remarks made in his paper on Pharmaceutical Education, in which he takes upon himself to abuse those teachers and institutions where a student can be prepared with greater rapidity and certainty than under himself at Bloomsbury-square. Of course, we must all admire Dr. Attfield's disinterested zeal which thus prompts him to take advantage of a paper on a general subject, to have a promiscuous onslaught on his most serious rivals in pharmaceutical teaching, whom he, from his elevated position, looks down on and reviles as "crammers."

Dr. Attfield must have a very low opinion of the examiners if he thinks they can be hoodwinked in the manner in which he distinctly states they are. I, not being a *homme eminent* like M. Thiers or the learned Doctor, prefer to speak of the examiners as we have found them; and I beg to say that they are gentlemen far too well read up and much too sharp to be got over in any such manner. At the same time they are men of strict impartiality; and in the honourable position of independence, which they share with the Board of the London University, they say:—"We examine a man in a most practical manner, and if we find he is fitted to pass, we do not inquire whether he received his instruction from Dr. Attfield, Dr. Muter, or from his own master at home. I say it, and say it advisedly, that no man crammed on the system which Dr. Attfield pretends to have discovered as in operation at his opponent's schools, will ever pass the Board at Bloomsbury-square. The test of everything is its results, and the fact that Dr. Muter's students pass so well and so often in honours, proves that his system of education is sound, and that his pupils can face with confidence such men as Mr. Ince and Mr. Carteighe, neither of whom, I am sure, were ever deceived by cramming like that described.

I trust to have Dr. Attfield's avowal that he did not refer to the South London School of Chemistry and Pharmacy; but, until I have that, it is my duty to totally deny and repel with indignation his invidious attempt to depreciate our efforts towards giving that good pharmaceutical educa-

tion, which it is our proud boast that we provide on a scale of liberality and on an intelligent system of teaching hitherto unattained. I beg to deny most emphatically that a system of "cramming," such as our traducer sets forth, has ever been employed, or that our students have ever been taught by answers to questions learned by heart. Our lectures are delivered hourly in the usual academical manner. They are copiously illustrated by practical experiments and demonstrations, in a most complete and commodious laboratory; and our museum of specimens, supplied and maintained by one of the first wholesale houses in London, is second to none in the kingdom. A memorial is in course of signature by nearly 400 members and associates of the Society, who are indebted to our institution for their instruction, which will state in the clearest manner their opinion of Dr. Muter's system and powers as a lecturer, and indignantly deny Dr. Attfield's statements as far as we are concerned.

Let me put a case to the learned Doctor. Suppose that one of the persons he reviles were in his position at Bloomsbury-square; and suppose he were to put in action a superior and more intelligent system of instruction at another place, which caused men to learn with greater facility, and which made itself felt both commercially and otherwise, how would he like to be misrepresented and called a "crammer," and by implication a "thief," simply because he did not occupy a so-called professorial chair, and was not a member of the Conference, and so unable personally to defend himself?

I do not wish to take up any more of your valuable space, or I could point out some real curiosities of true cramming emanating from Bloomsbury itself. Among others a copy of Bentley's Botany marked by one of Dr. Attfield's own assistants with pencil here and there, and given to a student to learn the parts marked for the "Minor." This book was exhibited to Dr. Muter by a student, who protested that his lectures were much too copious and troublesome when "— at the Square had marked out far less as being necessary." Dr. Muter obtained the book, and we keep it as a curiosity. I would also ask Dr. Attfield, if he has never himself been guilty of asking at his weekly examinations such questions as his experience suggested, were somewhat common; and if he never said to a student, "You are sure to be asked this;" or, "You will never be troubled about that?" Let him make sure he does not live in a glass house before he throws stones. What is the short part on active principles of Materia Medica at the end of his own book, but a condensed "cram" of the most unblushing nature?

In conclusion, should it come to the recognition of certain schools, I have no doubt that we shall be able to prove our claims, and then our teachers will be quite as much "professors" as our learned opponent; but whether we are so recognised or not, we will never stoop to the tactics initiated at Brighton, of "This is the old original shop for pharmaceutical education, and no connection with the new-fangled ways of the crammer and thief over the water."

Yours obediently,

W. BAXTER, Secretary

South London School of Chemistry and Pharmacy,
231, Kennington-road. S.E.

CIVIL SERVICE CO-OPERATIVE STORES.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—I beg to thank you for your able parliamentary article in your journal of the 15th ult.

The National Chamber of Trade keenly appreciates your suggestions, but needs the assistance of the trade journals generally to awaken tradesmen to the rapid encroachments of the Civil Service co-operative societies. The Chamber has already done much to enlighten them on this subject, and is now ready for a comprehensive and determined attack upon these societies, and to show the position it has taken up with regard to them. The Committee are about to issue a very carefully prepared and instructive paper for that purpose.

This will be addressed personally to each member of the House of Lords and Commons, and, besides that, it is intended to give it the widest and fullest circulation possible, which the Committee trust the press will assist them in doing.

It will thus be seen that the declaration you have challenged has only been postponed till the fitting time, and if you will continue your valuable assistance, and your contemporaries aid in the contest, the National Chamber of Trade will have every reason to be proud of its efforts in the defence of trade, and tradesmen who withhold their support will have the melancholy satisfaction of not having contributed to suppress one of the greatest and grosser monopolies of the day. I remain, Sir,

Yours faithfully, FRED. MORRISON, Sec.

Office of the National Chamber of Trade,
10, Duke Street, St. James'.

ASSISTANTS' SALARIES.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—I am rather surprised at your remarks on the above subject. It may not, however, be proper for me to ask space in your columns to criticise editorial remarks, but should you be pleased to insert this letter, I will esteem it a favour.

You say you cannot take the matter up with any energy for the following reasons:—First, because vast improvements in both hours and wages have taken place within the last ten years, and that salaries, on the average, are double what they were twenty-five years ago. In reply to above reason, I think that if vast improvements have taken place there was really much need. The present low rate of wages proves this. Secondly, you say that assistants, unlike other *employés*, are not burdened with housekeeping, and that increased housekeeping expenses have been the cause of all our strikes; consequently, indoor assistants' salaries should be reduced. In reply to this, I would remind you, that, if an assistant resides in lodgings, he has to bear the extra charges of his housekeeper, consequent upon said increase; and if he is not burdened with keeping a wife and house of his own (your housekeeping, I presume), it is solely because he has not the income to support it. And why, let me ask, should not the druggists' assistant be in a position to enjoy such a blessing as well as other men? Is it because he continues to gain experience after having served his apprenticeship? If so, why not apply the same rule to every other tradesman? Again, I differ from you in the opinion that housekeeping has been the foundation cry of all our strikes. I believe the cause of strikes arose through a desire on the part of the various tradesmen to better their positions—to save money.

"Finally and chiefly," you discline to take the matter up with any energy, "because the nearer our business approaches a profession, so certainly will assistants' salaries be low." You say, "this is explainable," but you seem disinclined to explain the how or the why. You object to use, the least of your influence, to prevent such a calamity befalling such a large, respectable, and responsible body of men, connected with the trade you profess to represent; and content yourself by pointing to the *wretched salaries* paid to doctors' assistants, lawyers' clerks and curates: in short you seem to be satisfied that two blacks make a white. You close your remarks by saying that "those (assistants) whose single object is to gain a living, have no choice but to submit to the circumstances which govern their business." Pray, let me ask, who in the trade has any other object in view? I am not an assistant, and consequently have no direct or selfish interest in agitating for an increase of assistants' wages; but I like to see men paid such wages as their work and responsibilities demand; and contend that no such responsibilities, as those of a chemist's assistant, rest upon any other class of tradesmen—tradesmen whose wages are from 15 to 50 per cent. higher than our assistants.

True it is that comparatively few master druggists have been able to retire from business, and that their profits are not nearly so large as they ought to be, considering the small overturn of money in the business; but the remedy lies in the hands of the trade itself, and should be used forthwith to the advantage of both master and assistant.

I think that, had you suggested a rise of 100 per cent. upon retail prices, and fifty per cent. upon salaries, you would have pleased both master and *employé*; but you seem to favour (?) the former, and try to console the latter, by pointing to those who are in receipt of *wretched salaries* like themselves.

I conclude by advising the assistants to form a "Union," for the purposes of advancing their wages, and preventing their predicted decline, seeing that we are so fast approaching the standing of a profession. I think that such a union would prove a boon to the masters by rousing them to a sense of duty towards themselves and their assistants.

I am, Sir, yours truly,

JOHN CARR,

Dumbarton, August, 1872.

Chemist and Druggist.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

DEAR SIR,—In your last edition you published a letter on the above, and also favoured us with an article on the subject of Assistants' salaries, but I was much grieved to find that you took so one-sided a view of the matter.

You generously acknowledge that we have to work very long hours, and that our pay is very moderate. Now, with this acknowledgment, I think that the "point or two which you indicate as disinclining you to take the matter up with energy" may be easily counterfoiled. You say that during the last quarter of a century our salaries have, on an average, doubled; well, and if, as most undoubtedly is the case, money is four times as plentiful and cheap as it then was, and labour proportionately valuable, how then can you make use of that argument against our further advancement?

Then, again, you say that "it should be considered that assistants in shops, as a rule, are not burdened with housekeeping, as are most other *employés*, and it is the rapid increase in the cost of housekeeping expenses which has been the foundation cry of all our strikes." Now, I for one fail most decidedly to see the slightest force of argument against us in this point, for you cannot say that it is our choice to reside with our employers; and if they, knowing that by so doing they can extract from us longer hours of toil, and also keep us at less cost than we should be at elsewhere, choose to have us boarding in their own houses, thus sniting their own interest more than ours, I don't see how they can claim this as a reason for curtailing our salaries, simply because they can thus say that we have no housekeeping expenses.

I presume all will be ready to admit that it would be impolitic for the whole of us to go into business on our own account so soon as we are qualified for so doing; in fact, had we all serious intention of so doing—say, after three or four years' assistantship—I am quite certain that under such circumstances the number who would be "playing at masters" would soon render the job a very poor one, even for those who now are, through the assistance of their one, two, or more assistants, as the case may be, reaping a rich harvest; therefore I hold that by offering us suitable inducement to remain any length of time as assistants, the masters would be acting for their own interest as well as ours.

And then, taking it for granted that all cannot become masters, surely you, Mr. Editor, will not dare to say that they, therefore, must for ever be deprived of that greatest blessing bestowed on man by the Almighty—a wife—without which man is incomplete. Why must we sacrifice that happiness which was assuredly designed for us, more especially if we receive no adequate recompense for the same?

One thing, however, is pretty certain, and that is, that it is next to impossible for one of us to keep a family on the salaries which we at present receive, and unless we obtain something like justice at the hands of our employers, why,

"We have no choice, but single must remain."

Trusting that the whole regiment of my fellow-assistants will take the matter up in earnest, and thus ensure us that success which we undoubtedly deserve, and apologising to you, Sir, for trespassing so far on your valuable space,

I am, yours truly,

AN ASSISTANT.

SIR,—A very interesting letter to such as myself appeared under the above head in your last impression. I beg to endorse your correspondents' remarks, with that sense of an injured and hard-worked person that must be felt by every chemist's assistant throughout the country. The salaries we

receive are not sufficient to keep up a respectable appearance; and were it not that some of us are blessed with parents, who put their hands into their pockets when we apply to them, we should be snubbed by the greater part of respectable society. And yet some of your correspondents will persist in calling the practice of pharmacy a profession. Presuming that such is the case, I feel convinced that anyone who knew the miserably poor remuneration we receive, would treat this profession as no fit means of a livelihood for his son.

I think we ought to adopt the same principles as mechanics have acted upon, for we certainly have better grounds for so doing, and having passed the Minor Examination determine not to accept less than £45 for the first year.

If drapers, who have no examination to pass, shorter hours, etc., can obtain double this amount, why in the name of common sense should we lie down and be kicked.

Mechanics have held out for their rights and obtained them. Let us follow their example, by qualifying, and keeping back our services where they will not be properly remunerated. I earnestly hope some one else will respond to assistant's letter, and offer an opinion which may prove useful to us in this pitiable condition.

Yours truly, S. JONES.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—Will you kindly allow me to ask your correspondent "Assistant," if he has any means to suggest by which we may obtain the 50 per cent. he so admirably specifies as a fitting addition to our wages. For what is the use of individuals amongst us saying that we ought to have larger salaries and less hours of business, when we will not adopt the only means of obtaining what we desire, viz., *Combination*? Here in Manchester, which is supposed to be ever foremost in reform of every nature, a large number of the druggists' shops, in fact, all save the leading central establishments, open at hours varying from seven to eight a.m., and close at hours varying from nine to eleven o'clock at night. Now a number of these establishments employ assistants, and I, one of those assistants, and a victim to late hours, etc., last year hearing much of the agitation that was going on amongst all classes of workmen for less working hours, and increase of wages, bethought me that we might do something for ourselves, at least to curtail the shamefully long hours in which we labour. And where should my thoughts turn for assistance, but to the Manchester Chemists' and Druggists' Assistants' Association? Accordingly I appeared at the opening meeting of the last session of that society, and laid the question of the business hours before the assembled young men (there were about eighteen present), but I was told at once that they could not aid us, they being formed solely for the purposes of mutual improvement and the furtherance of their pharmaceutical studies. In vain I urged that the majority of our Manchester assistants and apprentices could not attend their improvement meetings because they were working when the meetings were being held; the whole eighteen were unanimous in the opinion that the Association could not take up our cause. Well, we called a special meeting, and a notice of it was widely circulated amongst druggists' employes, but alas! there were only a dozen present at that assemblage, eleven of the dozen being gentlemen who, employed in the chief establishments, and having early hours, came kindly to give their countenance and assistance, I myself, being the sole representative of the numbers employed in the suburbs, although the meeting was held at an hour when all, or almost all, might have attended. Of course, nothing came of it. Now in the face of these facts, and knowing that the drug market is overstocked with juniors (juniors are persons, who, having completed a long apprenticeship, and after a few hundreds have been spent on them by their parents, are content to perform all the drudgery of a chemist's retail for errand boy's wages), will "Assistant" excuse me for saying that I am far from being sanguine as to our obtaining either the fifty per cent. or less hours of business, unless he has some novel plan to suggest to free chemists' assistants from their cowardice, and general indifference to their own interests.

Yours, &c.,

MANCHESTER ASSISTANT.

Ancoats, Sept. 2, 1872.

THE ADULTERATION ACT.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—I would suggest through your pages the desirability of the chemists and druggists forming an association to protect themselves from petty prosecutions which may take place under "The Adulteration Act." By the 3rd Clause we are liable to a series of prosecutions, and upon that clause I have heard that the authorities and counsel are already at variance. As vendors how are we to prove that we did not know of any impurity in proprietary goods, or that we told the purchaser the article, though called by a certain name, contained other constituents.

Yours truly, JOHN TIRRELL.

Hanley, Sept. 6.

THE SALE OF PARAFFIN, BENZOLINE, ETC.

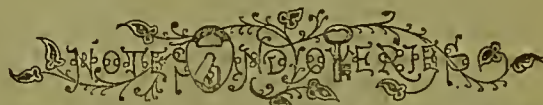
TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—As winter is fast approaching, allow me to call your attention to a practice which seems to be an increasing evil amongst oil merchants, ironmongers, druggists, etc., of selling paraffin, benzoline, etc., after 6 o'clock, thus endangering property and life to an alarming extent. I think if Parliament would take the subject in hand and restrict the sale to a certain hour, it would be a universal boon, especially to owners of property. I am acquainted with a tradesman who does not scruple to sell these dangerous commodities after 9 p.m. on a Saturday night over the counter, and by the light of a naked candle. Apologising for thus troubling you,

I am, Sir, Yours truly,

EDWARD C. ELLIS.

Thornbury, August 19, 1872.



WE beg to acknowledge the polite letters of Messrs. F. M. Rimmington, (Bradford), Edward Smith (Torquay), R. W. Giles (Clifton), E. C. C. Stanford (Glasgow), and others, the receipt of which has been otherwise accounted for.

Mr. C. J. Sage, of Frome, writes to us to advise other chemists of the style of business adopted by a firm styling themselves "Newman and Co.," selling "Howard's Australian Vermin Killer." Our pages have before exposed these gentlemen. Their vermin killer is, we are told, harmless, and the written guarantee which they give with a gross, that the money shall be returned in six months if the goods are not sold, has been found to be valueless.

Mr. Walter Stead (Heckmondwike).—You do not need a petroleum licence unless you sell petroleum giving off inflammable vapour at less than 100° Fahr. The Board of Health is the proper body to apply to for a licence.

Inquirer.—The following is a French formula for a depilatory powder:—
Quicklime, grm. xxx.
Yellow sulphate arsenic, grm. ii.
Starch in powder, grm. xxiv.
Mix. For use, dissolve a little in a small quantity of water, and apply it to the spot affected. The result follows in a minute or two.

Faithful.—Don't you think it rather cool to ask us to insert an anonymous letter in our paper in which you not *anonymously* reflect on the character of some one else? You may have been injured, but we are not inclined to be.

Sarum.—For ink formulae, see an article in our June number. A solution of yellow prussiate of potash to any ordinary black ink, renders it incapable of being removed or altered. Oxalic and other acids convert it into Prussian blue. Shaving cream may be constructed as follows:—

- Naples Soap, 4 oz.
- Castile Soap (powd.), 2 oz.
- Honey, 1 oz.
- Ess. Ambergris.
- Ol. Cassia.
- Ol. Myristica, aa, 5 drops.

M. T. T. (Manchester).—We must decline to recommend between "the Society's, Mr. Braithwaite's, and Dr. Muter's Schools of Pharmacy, for quickness in preparing for the respective examinations." You ask for our advice, however, and we will give it. It is that you should first of all attend the courses of lectures which the Manchester Chemists' Association will provide this winter.

E. (Edinburgh).—The Secretary of University College informs us that the judgment of Lord Gifford does not apply to any Institutions except the Universities of Scotland, and has no bearing upon the University of London or upon this College. The University of London is entirely incapable, under its existing charters, of conferring any free whatever upon ladies; and no provision has been, or is likely to be made for giving instruction in medicine to ladies at this College."

P. (Dublin).—Liquid Balsam of Tolu would be simply a strong rituous solution. We have always found the syrup made according to Pharmacopœia keep a reasonable time.

Pyrotechnist.—We cannot, of course, say what view your local magistrates might take of the matter if it came under their notice, but we only think they can have any right to prevent chemists from selling certain chemicals which produce coloured fires, nor even from announcing that those chemicals will produce coloured fires.

We beg to say here that our Diary for 1873 will contain scores of most valuable formulae, many of which are such as are not often met with.

Trade Memoranda.

APPARENTLY the inventive faculties of the manufacturers of feeding bottles are exhausted, for we have not come across a perfectly new design for the first few months. Messrs. Dixon, Dean, and Co., however, send us a specimen of a nice-looking, white glass sixpenny bottle, which at the present cost of raw material seems remarkably cheap.

The Guardians for the parish of Birmingham are prepared to receive tenders for the supply of drugs and druggaleries. Tenders to be opened on the 18th inst.

A correspondent from Vienna writes to us to urge British manufacturers of perfumery not to miss the opportunity of producing their products at the Exhibition to be opened next summer in that city. "All the English make of perfumes," he writes, "are appreciated here." He also thinks there is a good opening for druggists' sundries.

WILLIAM SUMNER, CHEMIST AND DRUGGIST, HIGH STREET, CHEAPSIDE, BIRMINGHAM.—A petition under the liquidation clauses of the Bankruptcy Act having been filed in this matter, Mr. Lomas Harrison (Harrison and Starkey), as representative of a large body of creditors, has been appointed receiver.

HUNSLET UNION.—The guardians are prepared to receive tenders for the supply of drugs, medicines, etc., for six months. September 18th.

CHARLES MILLER BROWN, CHEMIST AND DRUGGIST, WITNEY.—A dividend of 6s. 3d. in the pound has been declared in this matter.

Messrs. Van Duzer and Richards, the proprietors of Mrs. Len's World's Hair Restorer, and Zylbalsamum, have opened a depot in Paris for the sale of these preparations, at No. 35, Boulevard Hausmann.

ROBERTSON COOK, JOHNSON, AND CO., BROMLEY-BY-BOW. The debtors, Robertson Cook and Alexander Johnson, of the Imperial Works, Bromley-by-Bow, trading in copartnership as manufacturing chemists, etc., presented their petition for liquidation on August 23rd, and the meeting of creditors was held on the 12th inst., at two o'clock, to be held at the Guildhall Tavern, Gresham-street. The joint liabilities are returned at about £8,700, and the assets (consisting of stock, machinery, etc., used by the debtors in their business) are reported to be of considerable amount, but the true value is unascertained as yet. The following are creditors: Messrs. Brough and Co., Upper Thames-street, £49 12s. 4d.; Messrs. Gutter, Lower Thames-street, £75 8s. 10d.; S. J. Bligh, High-street, Whitechapel, £72 11s. 6d.; Messrs. Smith and Johnson, Leadenhall-street, £157 16s. 5d.; Messrs. Banks, Kidderminster, £481 7s. 8d.; W. H. Bennett, 103, Lion-square, £80; J. Coombe, Lady Lake's-grove, Epsom, £39 2s. 7d.; Edwd. Cook and Co., East London Works, Bow, £24 11s. 8d.; Cartwright, 22, Water-lane,

£224 19s. 7d.; Davis and West, Cannon-place, Whitechapel, £21 13s. 3d.; R. and J. Dunston, Montreal, £260; Durrant and Co., Bankside, Southwark, £98 8s. 11d.; R. Folkard and Sons, 57, Broad-street, £108 6s. 9d.; H. Grosvenor, Bridgewater-square, £24 1s. 4d.; Jennings, Leadenhall-street, £36 4s. 8d.; Kemball and Co., Bromley-by-Bow, £60 15s.; Kessell and Kleia, £112 2s. 5d.; General Trading Company (Limited), £479 13s.; E. Lucas and Co., Sheffield, £30 5s. 2d.; G. H. Mason, Poppin's-court, Fleet-street, £21 16s. 3d.; A. McLaren and Co., Upper Thames-street, £74 7s. 9d.; North British Rubber Company, £33 3s. 2d.; Owen and Mertens, St. Mary-at-Hill, £500; Miss Ann Pinchin, Canada, £1,250; Rice Brothers, London-bridge, £35 10s.; Sir W. Rose and Co., Upper Thames-street, £58 17s. 5d.; Spicer Brothers, New Bridge-street, £106 14s. 9d.; Walker, Alkali Company, Walbrook, £30 12s. 7d.; Shoolbred, 32, Nicholas-lane, £193 10s. 3d.; E. J. Webber, Bromley, £22 8s. 4d.



CHAPTER 74.

An Act to amend the Law for the prevention of Adulteration of Food and Drink and of Drugs.

(10th August 1872.)

WHEREAS the practice of adulterating ^{A.D. 1872.} articles of food and drink and drugs for sale, in fraud of Her Majesty's subjects, and to the great hurt of their health and danger to their lives, requires to be repressed by more effectual laws than those which are now in force for that purpose:—

Be it therefore enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. Every person who shall wilfully admix, and every person who shall order any other person or persons to admix, with any article of food or drink, any injurious or poisonous ingredient or material to adulterate the same for sale, and every person who shall wilfully admix, and every person who shall order any other person or persons to admix, any ingredient or material with any drug to adulterate the same for sale, shall for the first offence forfeit and pay a penalty not exceeding fifty pounds, together with the costs attending such conviction, and for the second offence shall be guilty of a misdemeanor, and be imprisoned for a period not exceeding six calendar months, with hard labour.

2. Every person who shall sell any article of food or drink with which to the knowledge of such person any ingredient or material injurious to the health of persons eating or drinking such article has been mixed, and every person who shall sell as unadulterated any article of food or drink, or any drug which is adulterated, shall for every such offence, on a summary conviction of the same before two justices of the peace at petty sessions in England, or before two justices of the peace in the justices of the peace court, or before the sheriff substitute of the county, or before any magistrate acting under any general or local Police Act

Penalty on persons adulterating articles of food or drink or drugs.

Penalty on persons selling articles of food or drink or drugs which they know to have been adulterated.

in Scotland, or before justices at petty sessions or a divisional justice in Ireland, forfeit and pay a penalty not exceeding twenty pounds, together with such costs attending such conviction as to the said justices, sheriff substitute, magistrate, or divisional justice shall seem reasonable; and if any person so convicted shall afterwards commit the like offence, such justices, sheriff substitute, magistrate, or divisional justice shall cause such offender's name, place of abode, and offence to be published, at the expense of such offender, in such newspaper or in such other manner as to the said justices shall seem desirable.

Vendor to declare mixture at time of sale.

3. Any person who shall sell any article of food or drink or any drug, knowing the same to have been mixed with any other substance with intent fraudulently to increase its weight or bulk, and who shall not declare such admixture to any purchaser thereof before delivering the same and no other shall be deemed to have sold an adulterated article of food or drink or drug, as the case may be, under this Act.

Pharmacy Act, 1868, and 23 & 24 Vict. c. 84, incorporated with this Act. Proviso, 23 & 34 Vict. c. 26.

4. The Pharmacy Act, 1868, and the Act twenty-third and twenty-fourth Victoria, chapter eighty-four, for preventing the adulteration of articles of food and drink, shall be deemed to be incorporated in this Act: Provided always, that in the application of this Act to Ireland the Act passed in the session of Parliament held in the thirty-third and thirty-fourth year of the reign of Her present Majesty, chapter twenty-six, intitled "An Act to regulate the sale of poisons in Ireland," shall be deemed to be incorporated in this Act instead of the Pharmacy Act, 1868.

Appointment of analysts.

5. In the city of London and the Liberties thereof the commissioners of sewers of the city of London and the liberties thereof, and in all other parts of the metropolis the vestries and district boards acting in execution of the Act for the better local management of the metropolis, in England the court of quarter sessions of every county, and the town council of every borough having a separate court of quarter sessions, or having under any general or local Act of Parliament or otherwise a separate police establishment, in Ireland the grand jury of every county, county of a city, and county of a town, and town council of every borough, and in Scotland the commissioners of supply at their ordinary meetings for counties and the commissioners or boards of police, or where there are no such commissioners or boards the town councils for boroughs, within their several jurisdictions, may, and when required so to do by the Local Government Board in England, or by one of Her Majesty's Principal Secretaries of State in Scotland, or by the Lord Lieutenant or other chief governor or governors in Ireland, shall, for their respective city, districts, counties, or boroughs, appoint and remove one or more persons possessing competent medical, chemical, and microscopical knowledge as analysts of all articles of food, drink and drugs purchased within the said city, metropolitan districts, counties, or boroughs, and shall pay to such analysts such salary or allowances as they may think fit; but such appointments and removals shall at all times be subject in England to the approval of the Local Government Board, in Scotland of one of her Majesty's Principal Secretaries of State, and in Ireland of the Lord Lieutenant or other chief governor or governors.

Inspectors of nuisances, &c., may submit articles to be analyzed.

6. The inspector of nuisances or the inspector of weights and measures, or the inspector of markets, one or all of them, as the local authority appointing them shall think fit to determine, in every district, county, city, or borough, shall procure and submit samples of articles of food or drink and drugs suspected to be adulterated to be analyzed by the analysts appointed under this Act, and shall, upon receiving a certificate stating that the articles of food or drink or drugs are

adulterated, cause a complaint of an offence against this Act by the party selling or adulterating such articles of food or drink or drugs to be made before a justice of the peace, and thereupon such justice shall issue a summons requiring the seller or the adulterator to appear before two justices of the peace at petty sessions in England, or before two justices of the peace in the justice of the peace court, or before the sheriff substitute of the county, or before any magistrate acting under any general or local police Act in Scotland, or before justices of petty sessions or divisional justices in Ireland, to answer such complaint and such summons shall be served by delivering the same, or a true copy thereof, upon the premises where such samples were obtained or sold, and the expense of such prosecutions, if not ordered to be paid by the party complained against, shall be deemed part of the expense of executing this Act.

7. The analysts appointed under this Act shall report quarterly to the local authorities appointing them the number of articles of food, drink, or drugs analyzed by them under this Act during the foregoing quarter, and shall specify the nature and kind of adulterations detected in such articles of food, drink and drugs, and all such reports shall be read at the meetings of the local authorities appointing such analysts.

Analysts to make reports quarterly to local authorities.

8. On the hearing by the justices, sheriff substitute, magistrate, or divisional justice of any complaint under this Act in any district, county, city, or borough wherein analysts shall have been appointed under this Act, the purchaser, or inspector of nuisances, or the inspector of weights and measures, or the inspector of markets, as the case may be, shall prove to the satisfaction of such justices, sheriff substitute, magistrate, or divisional justice that the article of food or drink or drugs alleged to be adulterated was delivered to the analysts in the same condition as regards its purity or impurity as it was when received from the seller.

Proof of identity of articles submitted to analysts.

9. Any purchaser of any article of food or drink or drugs in any district, county, city, or borough where there is any analyst appointed under this Act shall be entitled, on payment to the inspector or inspectors appointed under this Act of a sum not less than two shillings and sixpence nor more than ten shillings and sixpence, which shall be accounted for to the local authority appointing such inspector or inspectors, to have any such article analyzed by any analyst who may be appointed for such district, county, city, or borough, and to receive from such analyst a certificate of the result of his analysis, specifying whether, in his opinion, such article is adulterated, and also whether, if it be an article of food or drink, it is so adulterated as to be injurious to the health of persons eating or drinking the same, and such certificate, duly signed by such analyst, shall, in the absence of any evidence before the court to the contrary, be sufficient evidence of the matters therein certified, and the sum so directed to be paid for such certificate shall be deemed part of the costs.

Purchaser of articles of food, &c., may require same to be analyzed.

10. All articles of food, drink, or drugs to be analysed by the analysts appointed under this Act shall be received by the inspectors appointed by the local authorities, and from all such articles of food, drink or drugs, samples shall be taken and sealed in the presence of the analysts by the inspectors, to be retained by them and produced in case the justices, sheriff substitute, magistrate, or divisional justice shall order other analyses to be made.

Articles of food, &c., ordered for analysis to be received and sample retained by inspectors.

11. The expense of executing this Act shall be borne, in the City of London and the liberties thereof, out of the consolidated rates raised by the commissioners of sewers of the City of London and the liberties thereof, and in the rest of the metropolis out of any rates or funds applicable to

As to expenses of executing Act.

the purposes of the Act for the better local management of the metropolis, and in counties out of the county rate, or out of the grand jury cess in Ireland, and in boroughs out of the borough fund, and in Scotland out of the police money in counties and boroughs respectively.

12. Nothing in this Act contained shall be held to affect the power of proceeding by indictment, or to take away any other remedy against any offender under this Act.

GAZETTE.

BANKRUPT.

ENNET, WILLIAM FORD, Emsworth, surgeon.

PARTNERSHIPS DISSOLVED.

OLBORNE and KITCHENER, Chippingham, Wilts surgeons.

HATRICK, W. R. and Co., wholesale chemists and druggists, Glasgow; as regards William Hatrick. Business continued, under the same firm, by Robert Robb Hatrick, chemist and druggist, Glasgow, and James Lindsay Hatrick, sometime residing in London, now in Glasgow.

MILLIPS, G. S., and R. HISCOCK, 5, Earl-street, Coventry, chemists.

HACKER and HOFFE, Molesworth-place, Dublin, wholesale druggists; by retirement of Robert James Graham.

MAINWRIGHT and LUCAS, or the SULBY GLEN STARCH COMPANY, 9, Lower Thames-street, London, and Sulby Glen Works, near Ramsay, Isle of Man, starch manufacturers and drysalers.

WILD and CROSSLEY, Victoria Mills, Leeds, drysalers.

ARRANGEMENTS OR COMPOSITIONS.

BRAY, FREDERICK WILLIAM, East Dereham, chemist and druggist.

BEERE, LOUIS EDWARD, trading as L. E. Beere and Co., 23, Hampstead-road, chemist and druggist.

BOWRON, WILLIAM MOSS, Stockton-on-Tees, analytical chemist.

COOK ROBERTSON, and ALEXANDER JOHNSON, trading as Robertson, Cook, Johnson, and Co., Imperial Works, Bromley-by-Bow, manufacturing chemists.

DANIEL, CYRUS OCTAVIUS, 178, Strand, surgeon.

HARPER, JOHN WILLIAM, Stowmarket, surgeon.

HOWLES, WILLIAM HENRY HALEY, Holmfirth, chemist, druggist, and dentist.

LOGSON, THOMAS FREDERICK, Horncastle, chemist and druggist.

MEYER, ARTHUR BRISLEY, Holy-walk, Leamington Priors, surgeon.

TAYLOR, WILLIAM, 61, Market-street, Heywood, druggist and dentist.

TOWERS, THOMAS, 3, Norwood-grove, and 24, Lord-street, Liverpool, soda and mineral water manufacturer.

WRAITH, WILLIAM, 78, Grosvenor-road, Highbury New-park, surgeon, and 3, Jamaica-terrace, West India Dock-road, apothecary.

WHITLOCK, EDWIN, 153, High-street, Southampton, chemist and druggist.

Exchange Column.

REVISED TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word. If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the publisher of the CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to "The Publisher of the CHEMIST AND DRUGGIST, Colonial Buildings, Cannon-street, London, E.C., the envelope to be addressed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

Ten dozen Gillard's Condiment and Box, 44s. 17/508.

Barff's "Chemistry," new. 31/508.

Price sent of any Second-hand Book, any subject. "Chemical," 4, Durham-place, Seven Sisters'-road, London, N.

Quantity of Syrup. Mori B.P., quite new and low-priced, Minster, Kent.

Kindley's "Flora Medica," published 18s., 650 pages, splendid condition, 10s. or offer, M., Post-office, Horncastle.

Druggists' Bottles, Drawers, Cases, etc. State particulars and lowest price to A. W., Post-office, Wetherby.

Ivan's 25s. Cabinet of Materia Medica, equal to new. Price 17s. Address W. H. Harrop, Halesowen.

India-rubber Urinal, night or day. New. Cost 10s. Offers—Andrew Gall, Druggist, Aberdeen.

Six and a-half doz. 9d. Patterson's Smut Eradicator for 20s. White, chemist, Mayfield, Sussex.

Two Iron Mortars. Capacity, 16 pints each. Upright 10s. bell shape 11s. cash. J. Floyd, Bury St. Edmunds.

Erichsen's "Surgery," in first-class condition. 1853 edition. Cost 25s. Price 8s. 51/508.

Original Formula of Cheddar Cliff Bouquet. 5s. H. Seymour, Okehampton, Devon.

Dry-Counter Scales (good); Sundries, various kinds and useful; valuable Recipes. Wanted, Pill Machine. Carrington, Wincanton.

Ellis's Anatomical Plates, coloured, quite new, published at six guineas. Half price or exchange. P. B., Post-office, Leighton-road, London, N.W.

Two original Hampers of genuine German Seltzer (quarts). Cash price for the two, 15s. Each hamper contains two dozen bottles. 18/808.

First-class 4-plate Lens and Mahogany Camera, brass-bound, with Stand, Bath, Dipper, and Case. Price 30s. A bargain. Sayes, 16, Brook-street, Ipswich.

A 24, 5-grain Pill Machine, almost equal to new. Price 15s. A bargain. P. M., 51, Linthorpe-road, Middlesbrough.

Ten sets of 8 Forceps, in leather pouch of very good quality 25s. the set, cost 50s., being a bankrupt's stock. Address, J. C., 14, Netherthorpe-street, Sheffield.

Five Hundred dozen (or less) Indian Vegetable Flesh Rubbers, at 2s. 6d. per dozen. Apply to G. Dowman, chemist, Southampton.

Christison's "Dispensatory," exchanged for Attfield's "Chemistry" second edition. Henderson, 6, Victoria-terrace, Leamington.

About 2 gross of Whittle's Aromatic Peppermint in exchange for Whelpton's or Holloway's Pills, or any article saleable. Address, Swift, chemist, Great Bridge.

An Edward's Patent Nitrous Oxide Gas Apparatus, nearly new, complete in case with a 50-gallon Bottle of Liquid Gas—cost £5 15s., cash price £4. 11/508.

Pharmaceutical Journal, vol. ii., new series; one number missing. Offers wanted. "Gulielmus," chemist, Lockwood, Huddersfield.

Nitrous Oxide Apparatus, with Gasometer, Washing Bottles, etc., all complete, by Sprague, New York; only £4 15s.; a bargain. Apply 151, Hoxton-street, N.

A capital pair of Lanterns, 3½ double Condensers, with 20 Slides, 3 inch. Price £3. A bargain. W. H., 455, Kingsland-road, London.

Eight-cell Daniel's Battery, porcelain and glass; nearly new. 20s. Packed in box. H. Seymour, Okehampton, Devon.

For £45 cash, S. Barnett's No. 4 Soda-water Machine; Dow and Co.'s Bottling Machine. Syruping Tap and Tin, in good working order. 53/508.

Binocular Microscope, first-class, quite new, with Polariscope, and other apparatus, in handsome polished mahogany cabinet. Only £10 10s. Apply B., 151, Hoxton-street, N., London.

Three Mamma Feeders; 2 Gas Burners, 2 lights each; 1 4-gal. Show Carboy, with cut stopper; 1 gross penny Black Lead; Various Books. Jenner, Chemist, Hailsham, Sussex.

Statham's 3 guinea Chemical Cabinet, containing 40 turned boxes, 44 bottles (22 stoppered) and chemicals, but no apparatus. Price 15s. Walker, Chemist, Dresden, Staffordshire.

Six doz. gilt-labelled Shop Bottles mixed sizes; six doz. Hancock's Cement, 6d. size; Cod-liver Oil Capsules, 12 boxes, containing 3 doz. each. For Cash. Baxter, Park-lane, Leeds.

2-Gallon Swan-neck Show Globe, 1 Baxter's Lung Preserver, 2s. 9d.; 3 Baxter's Quinine Pills, 1s. 1½d.; Woolley's Candy, 2s. 9d.; 1 doz., 1s. 1½d. Offices, Bygott, Huddersfield.

Six One-gallon Carboys; mahogany stands. Counter Scales and Weights, a number of Shop Bottles, Jars etc., several Pairs of Forceps, Lancet, Dispensing Screen, three Glass Cases, at 5s. "Brown's Acacian Balsam." Smith, Horton-road, Gosport.

Owen's "Compendium" Receipts and Processes of Pharmacy, Chemistry, Confectionery, Perfumery, Cosmetics, Homœopathy, Essences, Wines, latest Discoveries and improvements. New impression. Thirteen stamps. Invaluable. Owen, Chemist, Stratford.

Townsend's Sarsaparilla; Whelpton's pills; Woodcock's Wind Pills; Henry's Nervine, for cash or exchange for any general selling preparation or patent medicines. Apply "Pica," Whittaker and Co.'s, Ave Maria-lane, London.

Two Eight-gallon Show Carboys, pear shape, 30s. One Turner and Co.'s and one Ashton and Parson's "Homœopathic Code," complete, cost £7 10s. and £3 3s., price £5 10s. and £2 5s. Four 28 lb. tins Natal Arrowroot 6½d. lb. G. H. King, Steelhouse Lane, Birmingham.

"Popular Encyclopædia," Blackie and Son, just published, not soiled, 14 vols., cost £7, take £5, cash. Sale or exchange. "British Homœopathic Pharmacopœia," latest, not soiled, Reservoir Enema, cost 27s., take 15s. Chemist, 2, Denison-place, Rusholme.

Seventeen Volumes "Quarterly Journal of Microscopical Science," from 1853 to 1869, handsomely bound, price £15; also "Phycologia Britannica," in 4 vols., illustrated, price £11. Apply to Alexander Cleghorn, Chemist and Druggist, Crossgate, Cupar, Fife, Scotland.

Mahogany Chemical Chest, complete and perfect; cost £6 new; price £3 10s. Hooper's Water Mattress; only used two hours; cost £11; price £6, with bellows complete. Two good Pill Machines, 5 grains; make 12 and 24 pills; price 8s. each. George Drury, Southwell, Notts.

Four Cannon's 1s. Restorative Pomades. Six Cleaver's 6d. assorted Pomades. Three Yardley's 6d. Tar Soap. Three lb. Castille Soap. One lb. Powdered Turmeric. Half lb. powdered Caraway. Half lb. powdered Aniseed. One lb. Ung. Althæa. Three Cleaver's 6d. Bear's Grease. Pereira's "Materia Medica," last edition. C. J. Kirkman, Chemist, Stratford.

Four stone Soda Bicarb. (Chance's) for 10s.; 1 lb. Fol. Hyoscyam, 3s. 3d.; 1 lb. Fol. Digitalis, 8d.; 3 lbs. Acid Citric (fine crystals), 11s. 3d.; 3 oz. Ammon. Bromid., 1s. 3d.; 5 oz. Acet. Zinc, 5d.; 1½ lb. Inf. Rhei. Conc., 3s.; ½ lb. fine Honeycomb Sponge (three large pieces), 5s.; one pair Lower Molar Forceps, 3s.; one pair Upper Incisors, 3s.; one Fox's Tooth Key, 5s.; 18 4 oz. Blue Dipped Jars (Gold Labelled), 7s. 6d. Apply to F. T. Allatt, Frizington.

The following Glass Cases etc., are for Disposal by Frazer and Green, Glasgow, all displaced by alteration in their premises:—Two large Slope Cases, each 42 by 27, and 7 inches deep, with mirror at back, and 3 Trays to pull out behind, Glass Slides, £4 each; 1 hinged Slope Case, 29 by 25, and 8½ inches deep, £2; 1 Slope Case, lift-off top, 28 by 22½, and 6½ inches deep, 30s.; 1 Slope, two-leaved and hinged Case, 72 by 14, and 6½ inches deep, £2 15s.; 1 double flat and hinged Case, one-half fitted with 3 Tooth-brush Trays, and other half suitable for Nail Brushes, 28 by 22½, by 7 inches, £3 3s.; 1 Slope Case with 3 divided Trays for Tooth-brushes, 22 by 15, by 6 inches, £2; 1 flat Case divided for Jujubes 26 by 14½, by 5½ inches deep, 21s.; 2 hinged and divided Cases, 22 by 16, by 5½ inches, 21s. each; 2 Slope Cases, lift-off top, glass sides, 21½ by 15, by 6 inches, 21s. each; 1 Slope Case, lift-off top, mahogany sides, 21 by 14, by 6 inches, 15s.; 1 Slope Stand, mahogany, only 3 shelves, pierced for 18 ¼-pints Farina's Cologne, 8s.; 1 small flat Case, to expose about 18 Capped Smelling Bottles, lined, 8s. All the above Cases are made of the finest Mahogany. 2 large (about 8 gallons) wide-mouthed Show Jars, labelled Magnesia and Sarsaparilla, height 29 inches, diameter at foot 14 inches, with oak covers and stands, plain gilt labels, 30s. each; 2 spare Stands and Covers, 5s. each; 6 flat Mahogany Stands for Show Jars of 10½ inches in diameter, 1s. 6d. each; 30 20-oz. N.M. Stoppered Flint Shop Rounds, 6s. per doz.; 24 40-oz. do., 8s. per doz.; 15 40-oz. W.M. do., 8s. per doz.

WANTED.

- An Iron Cistern for Oil. State price and condition. 8/508.
Cabinet of Materia Medica, in good condition. 47/508.
Arnold's "First Latin Prose Composition." 31/508.
Plates of the Plants for the Modified Examination. W. B., 46, High-street, Gosport.
Two or three Gross small Pots for Rat Paste. W. C., 52, Brunswick-street, Ardwick, Manchester.
A small Second-hand Steam Engine, in good order, to work a Soda-water Machine. J. J. Stone, Alton, Hants.
Homœopathic Show Case. P. B., Post-office, Leighton-road, London, N.W.
Richardson's "Mechanical Dentistry." Second-hand. Cash or barter. Carr, Chemist, Dumbarton.
A Small Sponge Case, similar to Maw's No, 90 or 92. Hutchinson, Duke-street, Leith.
Mühr and Redwood's Practical Pharmacy. State lowest price. Address "Chemicus," Mr. Wood's, North-street, Chichester.
Second-hand, Barber's "Pocket Pharmacopœia," and Lescher's "Elements of Pharmacy," Atfield's "Chemistry." Address J. Goodwin, Erdington, Birmingham.
Tanner's "Practice of Medicine," second edition; Robertson's "Manual on Extracting Teeth;" Handy's "Text-book of Dental Anatomy." State prices to G. Sant, Rose Bank, Leek.
Sowerby's "English Botany;" Gray's "Genera Birds;" Bolton's "British Song Birds;" the "English Cyclopædia;" Jardine's "Naturalist's Library." Metcalfe, Chemist, Kendal.
The last editions of Galloway's "First Steps in Chemistry," and key to answers, Bloxham's, "Laboratory Teaching," "Taylor on Poisons," Bentham's "British Flora." Address, W. F. Pearce, 1, Selby-street, Lowestoft.



[The following list has been compiled expressly for the CHEMIST AND DRUGGIST by L. de Fontainemoreau & Co., Patent Agents, 4, South-st., Finsbury, London; 10, Rue de la Fidélité, Paris; and 33, Rue des Minimes, Brussels.]

- Provisional Protection for six months has been granted for the following:—
2110. C. Bray, of Reheford, Essex. An improved hair restorer. Dated 12th July, 1872.
2118. E. C. C. Stanford, of Glasgow. Improvements in preserving and deodorizing seaweed, and in part applicable for deodorizing various animal and vegetable substances. Dated 13th July, 1872.
2137. J. Dale, of Manchester. Improvements in the manufacture of oxalates of soda and potash. Dated 17th July, 1872.
2141. H. S. Copland, of Duke-street, Adelphi. Improved apparatus for mixing precipitating materials with sewage and removing deposits, which apparatus is applicable also for other purposes. Dated 17th July, 1872.
2142. J. Inray, of London. Improvements in apparatus for supporting respiration and light in suffocating or explosive atmospheres. Dated 17th July, 1872.
2156. F. J. Cheesbrough, of Liverpool. Improvements in evaporating and concentrating sulphuric and other acids, also salt, sulphur, and other substances capable of evaporation and in the apparatus to be used therein. Dated 18th July, 1872.
2153. T. N. Palmer, of Dalston. An improved catamenial belt which may also be used for other purposes. Dated 22nd July, 1872.
2186. J. Thorn, of Chorley, Lancaster, and J. Stenhouse, of Pentonville. Improvements in treating fatty substances containing matters, and in obtaining useful products therefrom. Dated 22nd July, 1872.
2204. J. Cox, of East Stockwith, Lincoln, and S. Cox, of Camberwell. An improved apparatus for the recovery and extraction of oils and fats, spermaceti, paraffin, and wax, by the distillation of a volatile solvent through the materials containing them, and the recovery of such volatile solvent. Dated 24th July, 1872.
2235. H. A. Dufrené, of Paris. Improvements in concentrating and evaporating sulphuric acid and other liquids, and in the apparatus employed therefor. Dated 24th July, 1872.
2207. B. Hunt, of London. A new or improved apparatus or means for excavating, drilling, cleaning, filling, or otherwise treating teeth. Dated 24th July, 1872.
2227. M. H. Sygne, of Pall Mall. Improvements in deodorising apparatus. Dated 25th July, 1872.

2251. M. Mattson, of New York. An improved apparatus for administering vaginal and other injections, and box for containing the same. Dated 27th July, 1872.
2254. J. Fletcher, of Portfield, near Chichester, Sussex. An improved eye cup, to be used in the operation of dry cupping the eye. Dated 27th July, 1872.
2261. W. E. G. H. of Salisbury-street, Strand. Improvements in treating vegetable juices, and in the apparatus and materials to be employed therefor. Dated 27th July, 1872.
2265. A. M. Clark, of London. Improvements in the manufacture of phosphoric acid and acid phosphate of lime, and the applications of the same. Dated 27th July, 1872.
2277. E. P. H. Vaughan, of London. Improvements in the treatments of phosphates of lime. Dated 30th July, 1872.
2286. A. Browne, of London. Improvements and modifications in the treatment of phosphate in general, and in the production and purification of phosphoric acid and its combinations. Dated 30th July, 1872.
2320. E. Russ, of Winchester, Hants. An improved package box or receptacle for keeping or holding wines, spirits, or other liquids during transport or otherwise. Dated 3rd August, 1872.
2341. C. Morfit, of Baltimore, United States. Improvements in the manufacture of pure phosphates of lime. Dated 6th August, 1872.
2351. G. M. Moore, of Liverpool. Improvements in the process of evaporating or concentrating alkaline liquors in the manufacture of caustic soda, caustic potash, soda ash and other similar substances, also for heating or boiling, and refrigerating solutions in breweries, distilleries, chemical, and other manufactories, and in the apparatus employed therefor. Dated 7th August, 1872.
2369. W. R. Lake, of London. Improved nutritious compounds. Dated 9th August, 1872.

Letters Patent have been issued for the following :—

272. W. G. Walker, of Helensburgh, Dumbarton. Improvements in preserving food. Dated 29th January, 1872.
358. E. Burgess, of Moutroy, Wells, Somerset. Improvements in apparatus for evaporating and lucinating alkaline lyes, or solutions ordinarily used in the manufacture of paper, and in the treatment of such solutions when spent for the purpose of recovering therefrom valuable chemical products. Dated 3rd February, 1872.
359. W. Weldon, of Putney. Improvements in obtaining and decomposing sulphate of sodium and sulphate of potassium, and in obtaining hydrochloric acid and chlorine. Dated 5th February, 1872.
362. A. G. Bell, of Wardour-street, Oxford-street. An improved galvanic belt. Dated 5th February, 1872.
376. H. A. Bonneville, of Paris. A new and improved alimentary drink. Dated 5th February, 1872.
407. T. Gibb and C. Gelstharpe, both of Jarrow-on-Tyne, Durham. Improvements in the construction of furnaces for carbonating or drying alkaline salts and other substances, and in the method of working the same. Dated 8th February, 1872.
416. A. Cresswell, of Birmingham. Improvements in apparatus for straining or filtering liquids. Dated 9th February, 1872.
422. E. A. Cook, of Viewville house, Edinburgh, and N. M. Henderson, of Mid Calder, Edinburgh. Improvements in treating hydrocarbon oils. Dated 10th February, 1872.
425. R. F. Smith, of Glasgow. Improvements in obtaining yellow and red prussiates. Dated 10th February, 1872.
446. T. M. Wilson, of Bergen, Norway. Improvements in the mode of and apparatus for refining or purifying oils. Dated 12th February, 1872.
476. T. Rowan, of Glasgow. Improvements in preparing carbonates or oxides of lead and zinc for use as pigments and otherwise. Dated 15th February, 1872.
490. R. Graham and M. D. Wood, of Stockton-on-Tees, Durham. Improvements in apparatus used in the production of artificial teeth, known as "Dental Articulators." Dated 16th February, 1872.
508. J. Hargreaves and T. Robinson, of Widnes, Lancaster. Improvements in the production of chlorine and hydrochloric acid, and in apparatus employed therein. Dated 17th February, 1872.
509. J. Hargreaves and T. Robinson, of Widnes, Lancaster. Improvements in the manufacture of alkalies, and in apparatus employed therein. Dated 17th February, 1872.
513. J. Anderson, of Newbuildings, Londonderry, Ireland. Improvements in reducing oxides, and in obtaining iron, sodium, potassium phosphorus, chlorine or their compounds, and in apparatus therefor. Dated 17th February, 1872.
525. W. Gilkerson, of Diss, Norfolk. An improved measure for liquids. Dated 19th February, 1872.
517. S. W. Rich, of Chertsey-street. An improved process for treating aluminous schist or shale. Dated 20th February, 1872.
720. F. Trotman and W. Turner, of Regent's Park, and W. H. Ryves, of Maitland Park-road, St. Pancras. Improvements in the closing and opening of necked vessels or bottles. Dated 8th March, 1872.
975. F. Prudencio and J. E. Cotterell, both of Bath, Somerset. An improved apparatus for stoppering bottles. Dated 3rd April, 1872.
1455. S. Russell, of Bayswater. Improvements in means and apparatus for stoppering bottles containing aerated and other liquids. Dated 16th May, 1872.
1566. P. Michaelis, of Great Winchester-street Buildings. Improved means or apparatus for stoppering bottles. Dated 22nd May, 1872.
1567. P. Michaelis, of Great Winchester-street Buildings. An internal capsule for bottles. Dated 22nd May, 1872.
1695. J. Stevenson, T. Carlile, and J. Stevenson, all of Glasgow. Improvements in the manufacture of bichromates of soda and potash. Dated 5th June, 1872.
1702. G. B. Northeote, jun., of Feniton, Honiton, Devon. An improved apparatus for showing the level of liquid contained in a cask or vessel, and for a proportional measurer. Dated 5th June, 1872.
1709. L. Senla, of Clerkenwell-green. Improvements in dyeing when indigo is employed. Dated 6th June, 1872.
1980. W. M. Brown, of London. An improved apparatus for extracting ammonia in the form of liquid ammonia from crude ammoniacal liquors. Dated 22nd June, 1872.

Specifications published during the month :—

Postage 1d. each extra.

- 1871.
9235. C. B. Garrett. Ozone baths. 4d.
9306. W. R. Lake. Galvanic batteries. 6d.
9401. A. J. Eli. Stopping bottles, &c. 6d.
9436. J. A. Wanklyn. Utilizing sewage ammonia. 4d.
9448. A. Morris. Producing iodine and bromine. 8d.
9455. W. Anderson. Rendering sewage gases innocuous. 8d.
9469. J. Davies. Applying voltaic currents. 4d.
9484. H. Barrett and another. Stoppers for bottles. 8d.
9156. H. J. Fenner, and another, obtaining anthracene. 1s.
9493. J. Anderson. Reducing oxides. 8d.
9515. H. Y. D. Scott. Treating sewage water. 4d.
9529. C. C. Molchin. Oil for illuminating. 4d.
- 1872.
2. T. J. Smith. Treating lyes and wash waters. 4d.
37. W. E. Newton. Preserving edible animal and vegetable substances. 4d.
64. J. A. Coffey. Manufacture of sulphur, salts, &c. 10d.
66. J. Beswick and another. Tilting casks. 4d.
103. J. H. Johnson. Treating and utilizing acid gas tars. 4d.
113. F. P. Warren. Tins or cases for preserved meats, &c. 4d.
969. B. Platt. Purifying turpentine and resin, &c. 1s. 4d.



CONSIDERABLE flatness has prevailed in the market during the past month, and the amount of business has been restricted. This inactivity so generally apparent in the produce markets was further intensified by the news of Gledstones' "fall" on the 22nd ult. For some time past, the East-Indian Trade has been under a cloud, attributable in a great measure to the persistent decline in value of the chief Eastern staples. "Gledstones'" were regarded as a representative house in that trade, and enjoyed a reputation for commercial enterprise and probity of no mean order. The liabilities, roughly estimated at £1,500,000 to £2,000,000 indicate the extent of those transactions which have resulted so unfortunately.

The power to tax raw materials which M. Thiers wrung from the French Assembly has been applied in a rather unexpected direction. It was arranged that batches of material were severally to be taxed by promulgation, so as gradually to bring all under the commercial law which the President has obtained authority to impose. The first "slaughter of the innocents" is announced in a decree dated from Trouville, August 18, but in it no mention is made of such important articles as cotton, wool, flax, silk, etc. Instead thereof, M. Thiers falls foul of such things as pig and wild boar skins, fancy feathers, percussion caps, green vegetables and our familiar friends, opium, aloes, cassia, copaiba balsam and ginger-bread. Seriously, however, it is unaccountable that all the most important articles are passed over, and those mentioned selected to, bear the imposition first. It savours somewhat of timidity, and looks as though M. Thiers were beginning to doubt the soundness of his principles and deemed it wise to feel his way in carrying them into practice. Thus late in the day, we are not without hope that the disastrous commercial system inaugurated by the latest "Saviour of French society" may be abandoned.

BARKS.—Cinchonas have commanded fair attention, and a great part of the heavy parcels brought forward last month found purchasers. Of 216 serons yellow 170 brought full rates, good to fine selling at 3s. 1d. to 4s. 2d., selected bold 4s. 5d. to 4s. 7d., and inferior 2s. 9d. to 3s. 2d. It appears probable that the quinine-yielding kinds will soon be fetching better prices still. The Government cinchona plantations in British Sikkim are rapidly developing important results, and East India bark is now well known in this

market, no less than 7,000 lb. being sold last year. The samples differ appreciably from the South American kinds, and do not command such high rates. Continued careful supervision, however, cannot fail to beneficially affect the naturalized species, and altogether the prospects of cinchona cultivation in India are most encouraging. CINNAMON.—The last public sales were held on the 26th August, and a total of 1,732 bales of Ceylon was offered, against 995 bales at the May sales, and 2,268 at the corresponding auctions last year. There was little animation in the biddings, but as holders were disposed to effect clearances, the great bulk was disposed of, viz., 1,350 bales. A slight reduction was accepted for common and medium kinds, but good and fine qualities commanded full rates. We are advised that peeling operations in Ceylon have been suspended owing to the recent drought there, and are not expected to be actively resumed till next month. Up to the 2nd inst. the quantity of the bark afloat for Great Britain was 188,105 lbs. against 223,201 Sept. 5, 1871.

OPIMUM still maintains a firm aspect. We note the probability of the Indian Government getting a considerable sum in excess of the Budget estimate out of this important source of revenue. It was estimated that the average selling price would be £120 to £140 per chest, and this would have yielded a surplus of £900,000. But up to September 5 the general average has been £143 per chest, leaving thus far a handsome balance to the good. Nearly the entire bulk of Indian Opium finds its way into China, and in the face of this fact the increased and increasing cultivation of the drug in that country is not reassuring, and must eventually spoil our market to some extent.

ALOES.—Cape have experienced more attention, and are worth more money; but as already pointed out the enhanced value is attributable to limited supply, and it is stated that the collection in South Africa has been impeded by the diamond agitation there. Barbadoes in gourd have been more freely offered, and have met a commensurate demand. The market has been almost devoid of East Indian, and there is no business to report. Cardamoms have improved their position, and the crop of Malabars is said to be inferior in quantity as well as quality. At auction, on the 29th ult., 41 cases out of 51 offered, sold at 7s. 9d., and a few lots 7s. 10d., being stiffer prices. We anticipate further upward movements. The value of Buchu leaves is depressed, owing to an abundant stock, but Longs have not lost favour, and meet with fair attention when offered. Supplies of low Tinnevely Senna continue to come to hand, and have latterly been selling more readily. Fine kinds are scarce, and are well looked after. Camphor is flat, and business has been restricted throughout the month, Japan relatively scarce, and the only transaction of moment has been the sale of ten tubs at 87s. 6d. Cantharides gave signs of renewed animation, and at sales three casks of New Russian crop were taken back at 8s. Cocculus Indicus is coming forward in abundant supply, with corresponding decrease in value, and Guinea Grains are also receding. The demand for Honey has abated somewhat, and prices are easier. Chilian continues to be well offered in the face of less remunerative rates.

For fine Vanilla Beans a good demand has prevailed, and it is noticeable that prices have almost doubled since last year. We gather from New York advices lately to hand that the Mexican crop this year is only a trifle over one-third of an average. This information has been acted on in that city, and a heavy movement is recorded, 55 cases having been absorbed by one speculator, leaving but a very few cases in first hands. It appears that supplies have been directed to the other side instead of here, as usually happens, and considerable orders for the London market are reported to be lying in the Empire City for execution. It seems almost certain that present scarcity and high prices will be further intensified.

ESSENTIAL OILS.—Aniseed has been attacked by the "Bears" and the "Bulls" alternately, but for the present the victory remains with the latter, the price having advanced to 12s. 6d. We have already pointed out that large stocks are in existence, but as the article is obviously at the mercy of speculators, we are unable to indicate future movements. Citronelle and Lemon Grass are slightly stiffer,

and new English Peppermint and Lavender procurable on easier terms. Failure of the rose crop has affected the position of Otto, which is only procurable at an appreciable advance.

GUMS.—Good bright sorts of Arabic have been in demand, and brought full value. Ammoniacum is wanted, and Assafoetida has not been so freely offered, and in consequence stiffer prices are ruling. For Gamboge, Copal, Olibanum, and Benjamin prices are rather cheaper. The new crop of Scammony will soon be coming forward.

ROOTS.—Rhubarb was in fair demand at the commencement of the month, but subsequently sales fell off, and slightly easier rates have ruled. Ipecacuanha.—Considerable supplies have passed the hammer, but without suffering any appreciable decline in value. Fine qualities of Calumba would sell readily, but the dingy parcels lately put forward have been neglected.

DRY-SALTERIES.—Turmeric: The stock is large, and sales in quantity can only be effected on lower terms. China Galls have experienced more inquiry, and some quantity has been sold at 56s. 9d., being dearer. In Shellac a partial recovery has taken place, and the market is more steady. Of 354 chests offered at auction on the 7th inst., 210 found buyers. Accounts from India report the Indigo crop as excellent, and the out-turn is estimated at no less than 125,000 maunds. In Lower Bengal the crop is reported 50 per cent. higher than last year.

SPICES.—Good business has been done in White Pepper at firm prices. Mace rather dull of sale, but Nutmegs in fair demand. The new crop is shortly expected in the Batavian market. In Zanzibar Cloves a renewed movement has become apparent, and some sales have been effected at 6½d. Ginger: There was a good demand for Jamaica at auction on the 2nd inst. The quantity submitted consisted of 33 casks 418 barrels and 106 cases, and the greater part sold at a further slight advance. African worth more money, and 200 bags have been sold at 43s.

CHEMICALS.—Citric Acid is in improved demand, and is slightly enhanced in price. Tartaric also dearer, and Oxalic selling on easier terms. Chlorate of Potash has met considerable inquiry at an appreciable advance. Cream of Tartar steady at 105s., and refined Borax at 100s. Small sales of Bleaching Powder have been made at 14s. to 14s. 3d. per cwt. landed. China Vermillion more abundantly offered, and a reduction in value may be noted. Mercury is now quoted at £12 10s., and its preparations are slightly easier. Quinine has a very firm appearance, and both Howard's and Pelletier's now stand at 8s. The Indian Government has telegraphed home for 500 lbs, principally for use in Burdwan, where malarious fever is very rampant. Orders in connection with this demand are probably in the hands of manufacturers, and may have something to do with the firm position. It seems probable that the alkaloid will be extracted from Indian cinchona at the producing ground at no distant date, and there is some talk of the appointment by Government of a quinologist to superintend operations.

OILS.—Castor will not be obtainable on present terms much longer if reports from India are trustworthy. Castor-seed is said to be very scarce and dear, and the production of the oil much curtailed in consequence. Total shipments of Oil afloat for Great Britain on Sept. 2nd, was 5,240 cwt., against 10,977 corresponding time last year. Coconut has been selling more freely, and for Linseed lower rates are being accepted. In Fish Oils, the only important change is the advance of Cod-liver.

TURPENTINE has been gradually improving its position, and is now considerably dearer than last month's quotation.

Being unable to embody full results of drug sales on the 12th in our report, we append such market particulars as appear deserving of notice. ASSAFOETIDA: A parcel of 200 cases met active competition, the whole selling at firmer prices. CARDAMOMS: Malabars bought in at 8s. 4d., and private business reported at that price. The dormant demand for CUBEBS has revived in the face of holders concessions, and 141 bags sold, middling to fair 19s. 6d. to 22s. Musk again went off briskly, and VANILLOES are being held at the extreme price of 85s. A few cases of ANISEED OIL, put forward as a "feeler," were taken back at 13s.

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining-lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

1872.		1871.	
s. d.	s. d.	s. d.	s. d.
HEMICALS.			
ACIDS—			
Acetic per lb.	0 4½ to 0 0	0 4 to 0 0	
Citric per lb.	4 3 .. 4 4	2 11 .. 2 0	
Hydrochlor. per cwt	4 0 .. 7 0	4 0 .. 7 0	
Nitric per lb.	0 5 .. 0 5½	0 5 .. 0 5½	
Oxalic "	1 0 .. 1 0½	0 11 .. 0 0	
Sulphuric "	0 0½ .. 0 1	0 0½ .. 0 1	
Tartaric crystal .. "	1 6½ .. 1 7	1 4 .. 0 0	
powdered .. "	1 7 .. 0 0	1 4 .. 1 4½	
ANTIMONY ore..... per ton			
crudo .. per cwt	270 0 .. 290 0	240 0 .. 260 0	
regulus.. "	0 0 .. 0 0	47 0 .. 10 0	
star "	72 0 .. 75 0	48 0 .. 49 0	
ARSENIC, lump..... "			
powder.... "	18 6 .. 0 0	15 6 .. 16 0	
BRIMSTONE, rough .. per ton	140 0 .. 145 0	160 0 .. 0 0	
roll per cwt	10 0 .. 10 10	10 0 .. 10 10	
flour.... "	12 0 .. 12 10	12 0 .. 13 0	
IODINE, dry per oz.	1 10 .. 2 1	0 0 .. 0 0	
IVORY BLACK, dry.. per cwt.	8 6 .. 0 0	0 0 .. 0 0	
MAONESIA, calcined.. per lb.	1 6 .. 0 0	1 1 .. 0 0	
MERCURY..... per bottle	250 0 .. 0 0	220 0 .. 0 0	
MINIUM, red per cwt.	21 3 .. 21 6	21 0 .. 21 6	
orange "	31 6 .. 32 0	32 6 .. 0 0	
PRECIPITATE, red per lb.	4 2 .. 0 0	3 5 .. 0 0	
white .. "	4 1 .. 0 0	3 4 .. 0 0	
PRUSSIAN BLUE .. "	0 0 .. 0 0	0 0 .. 0 0	
SALTS—			
Alum per ton	160 0 .. 170 0	135 0 .. 140 0	
powder "	175 0 .. 180 0	145 0 .. 150 0	
Ammonia:			
Carbonate per lb.	0 7 .. 0 7½	0 6½ .. 0 6½	
Hydrochlorate, crude,			
white..... per ton	640 0 .. 0 0	460 0 .. 560 0	
British (see Sal Ammoniac)			
Sulphate per ton	420 0 .. 425 0	400 0 .. 420 0	
Argol, Cape per cwt	65 0 .. 90 0	60 0 .. 90 0	
Franco "	0 0 .. 0 0	0 0 .. 0 0	
Oporto, red .. "	24 0 .. 27 0	22 0 .. 24 0	
Sicily .. "	0 0 .. 0 0	0 0 .. 0 0	
Naples, white .. "	0 0 .. 0 0	0 0 .. 0 0	
Florence, white "	0 0 .. 0 0	0 0 .. 0 0	
red .. "	0 0 .. 0 0	0 0 .. 0 0	
Ashes (see Potash and Soda)			
Bleaching powd.. per cwt.	14 0 .. 14 3	14 6 .. 0 0	
Borax, crude "	60 0 .. 75 0	45 0 .. 60 0	
(Tincal) .. "	47 0 .. 65 0	45 0 .. 60 0	
British reftd.. "	100 0 .. 0 0	80 0 .. 0 0	
Calomel per lb.	3 9 .. 0 0	3 3 .. 0 0	
Copper:			
Sulphate per cwt.	33 0 .. 34 6	24 6 .. 25 0	
Copperas, green .. per ton	60 0 .. 62 10	50 0 .. 60 0	
Corrosive Sublimate.. p. lb.	3 2 .. 0 0	2 7 .. 0 0	
Cr. Tartar, French, p. cwt.	105 0 .. 0 0	93 0 .. 93 6	
Veuctian grey .. "	100 0 .. 0 0	95 0 .. 0 0	
brown .. "	90 0 .. 100 0	80 0 .. 85 0	
Epsom Salts per cwt.	5 9 .. 6 3	6 0 .. 7 0	
Glauber Salts "	7 6 .. 6 0	4 6 .. 6 0	
Lime:			
Acetate, white, per cwt.	14 0 .. 22 6	12 6 .. 23 0	
Magnesia: Carbonate .. "	42 6 .. 45 0	42 6 .. 0 0	
Potash:			
Bichromate per lb.	0 8 .. 0 0	0 10 .. 0 0	
Carbonate:			
Potashes, Canada, 1st			
sort per cwt.	37 0 .. 37 6	36 0 .. 37 0	
Pearlshashes, Canada, 1st			
sort per cwt.	53 0 .. 54 0	46 6 .. 47 0	
Chlorate per lb.	1 9 .. 0 0	1 4½ .. 1 5½	
Prussiate per lb.	1 5½ .. 0 0	1 6 .. 1 7	
red "	8 1 .. 0 0	2 5 .. 2 3	
Tartrate (see Argol and Cream of Tartar)			
Potassium:			
Chloride per cwt.	9 9 .. 10 0	10 6 .. 11 0	
Iodide..... per lb.	32 0 .. 0 0	28 0 .. 0 0	
Quinine:			
Sulphate, British, in			
bottles per oz.	8 0 .. 0 0	7 2 .. 0 0	
Sulphate, French .. "	3 0 .. 0 0	7 0 .. 7 6	
Sal Acetos per lb.	1 3½ .. 0 0	1 1½ .. 0 0	
Sal Ammoniac, Brit. cwt.	47 6 .. 49 0	41 0 .. 42 0	
Saltpetre:			
Bengal, 6 per cent or			
under per cwt.	28 3 .. 29 3	28 6 .. 29 3	
Bengal, over per cent.			
per cwt.	27 0 .. 28 0	27 0 .. 23 0	
Madras..... "	0 0 .. 0 0	0 0 .. 0 0	
Bomb. & Kurrachcep. ct.	0 0 .. 0 0	0 0 .. 0 0	
European..... "	0 0 .. 0 0	0 0 .. 0 0	
British, refined .. "	32 0 .. 33 0	32 3 .. 32 6	
Soda: Bicarbonate, p. cwt.	17 9 .. 0 0	14 0 .. 0 0	
Carbonate:			
Soda Ash..... per deg.	0 3 .. 0 0	0 2½ .. 0 2½	
Soda Crystals per ton	137 6 .. 140 0	116 0 .. 117 6	
Hyposulphite.. per cwt	16 0 .. 17 6	14 0 .. 16 0	

1872.		1871.	
s. d.	s. d.	s. d.	s. d.
Soda:			
Nitrate per cwt.	14 3 to 15 0	14 9 to 15 0	
SUGAR of LEAD, White, cwt.	45 0 .. 0 0	39 0 .. 40 0	
Brown .. "	30 0 .. 0 0	26 0 .. 28 0	
SULPHUR (see Brimstone)			
VERDIORIS per b.	1 1 .. 1 3	1 0 .. 1 2	
VERMILION, English.. per lb.	3 7 .. 3 9	3 4 .. 0 0	
China.... "	3 9 .. 4 0	3 4 .. 0 0	
DRUGS.			
ALOE, Hepatic.... per cwt.	100 0 .. 240 0	70 0 .. 220 0	
Socotrine .. "	160 0 .. 420 0	120 0 .. 280 0	
Capo, good.. "	28 0 .. 30 0	27 0 .. 36 0	
Inferior .. "	22 0 .. 27 0	20 0 .. 26 0	
Barbadoes .. "	76 0 .. 200 0	70 0 .. 210 0	
AMBERORIS, grey..... oz.	24 0 .. 27 0	25 0 .. 30 0	
BALSAM —			
Canada per lb.	1 6 .. 0 0	2 0 .. 0 0	
Capivi .. "	1 11 .. 2 1	1 9 .. 1 11	
Peru .. "	9 6 .. 0 0	9 3 .. 9 6	
Tolu .. "	1 9 .. 1 10	1 10 .. 1 11	
BARKS—			
Canella alba per cwt.	15 0 .. 25 0	15 0 .. 25 0	
Cascarilla..... "	26 0 .. 37 0	20 0 .. 37 0	
Peru, crown & grey per lb.	1 4 .. 3 0	1 3 .. 2 10	
Calisaya, flat .. "	3 4 .. 4 0	3 2 .. 3 4	
quill .. "	3 6 .. 4 3	3 2 .. 3 4	
Carthagea .. "	0 10 .. 2 0	0 10 .. 1 8	
Pitayo "	0 6 .. 1 9	0 10 .. 1 6	
Red .. "	1 10 .. 6 0	2 0 .. 7 3	
Bucha Leaves .. "	0 3½ .. 1 0	0 4 .. 1 0	
CAMPOR, China.. per cwt.	75 0 .. 80 0	70 0 .. 72 6	
Japan .. "	80 0 .. 0 0	75 0 .. 0 0	
Refin Eng. per lb.	1 3½ .. 0 0	1 3 .. 0 0	
CANTHARIDES .. "	5 7 .. 6 0	5 0 .. 0 0	
CHAMOMILE FLOWERS p. cwt	45 0 .. 70 0	40 0 .. 60 0	
CASTOREUM per lb.	3 0 .. 30 0	3 0 .. 30 0	
DRAGON'S BLOOD, lq. p. cwt.	110 0 .. 220 0	100 0 .. 230 0	
FRUITS AND SEEDS (see also Seeds and Spices)			
Anise, China Star pr cwt.	107 6 .. 115 0	127 6 .. 130 0	
German, &c. .. "	20 0 .. 35 0	41 0 .. 47 0	
Beans, Tonquin .. per lb.	1 4 .. 1 8	0 9 .. 1 6	
Cardamoms, Malabar			
good .. "	6 6 .. 7 10	9 6 .. 10 2	
inferior .. "	5 0 .. 6 0	7 6 .. 9 9	
Madras .. "	2 6 .. 6 0	3 6 .. 9 6	
Ceylon .. "	4 9 .. 4 3	3 1 .. 3 4	
Cassia Fistula.. per cwt.	11 0 .. 22 0	12 0 .. 30 0	
Castor Seeds .. "	5 0 .. 10 0	10 0 .. 12 0	
Cocculus Indicus .. "	14 6 .. 15 0	13 0 .. 20 0	
Colocynth, apple.. per lb.	0 3 .. 0 6	0 3 .. 0 6	
Croton Seeds .. per cwt.	55 0 .. 59 0	72 6 .. 75 0	
Cubebs .. "	30 0 .. 40 0	25 0 .. 26 0	
Cummin..... "	25 0 .. 32 0	43 0 .. 55 0	
Dividivi .. "	12 0 .. 15 0	12 0 .. 14 6	
Fenugreek..... "	12 0 .. 22 0	13 0 .. 22 0	
Guinea Grains .. "	37 0 .. 39 0	22 6 .. 23 6	
Juniper Berries .. "	10 0 .. 11 6	15 0 .. 15 6	
Myrobalans "	9 0 .. 13 0	12 0 .. 17 0	
Nux Vomica.... "	10 6 .. 15 0	11 0 .. 17 6	
Tamarinds, East India .. "	4 0 .. 16 0	2 0 .. 12 0	
West India, new .. "	20 0 .. 38 0	10 0 .. 27 6	
Vanilla, large per lb.	45 0 .. 55 0	30 0 .. 41 0	
inferior .. "	27 0 .. 43 0	12 0 .. 28 0	
Wormseed .. per cwt.	0 6 .. 0 0	0 0 .. 0 0	
GINOER, Preserved, in bond			
(duty 1d. per lb.) per lb.	0 6½ .. 0 10½	0 6 .. 0 10	
GUMS (see separate list)			
HONEY, Chili.... per cwt.	31 0 .. 39 0	43 0 .. 57 0	
Cuba "	35 0 .. 50 0	27 0 .. 42 0	
Jamaica.. "	30 0 .. 57 0	36 0 .. 53 0	
IFECACUANHA per lb.	4 10 .. 5 0	5 1 .. 5 2	
ISINGLASS, Brazil.. "	2 9 .. 4 7	2 4 .. 4 3	
Tongue sort .. "	3 4 .. 5 3	3 2 .. 4 8	
East India .. "	1 0 .. 4 3	1 4 .. 4 0	
West India .. "	4 0 .. 4 6	3 9 .. 4 0	
Russ. long staple .. "	8 0 .. 12 0	6 0 .. 9 6	
" leaf .. "	3 0 .. 7 6	3 6 .. 6 6	
" Simovia .. "	2 6 .. 4 6	2 0 .. 3 6	
JALAP, good .. "	1 3 .. 2 6	1 8 .. 3 2	
infer. & stems .. "	0 6 .. 1 8	0 6 .. 1 7	
LEMON JUICE ... per degree	0 1 .. 0 1½	0 1 .. 0 0	
LIQUORICE, Spanish per cwt.	35 0 .. 37 0	35 0 .. 37 0	
Italian .. "	40 0 .. 60 0	40 0 .. 60 0	
MANNA, flaky per lb.	3 3 .. 3 6	3 6 .. 4 0	
small..... "	1 10 .. 2 0	2 0 .. 2 2	
MUSK, Pod .. per oz.	19 0 .. 45 0	21 0 .. 37 6	
Grain .. "	59 6 .. 60 0	0 0 .. 0 0	
OILS (see also separate List)			
Almond, expressed per lb.	1 1 .. 0 0	1 4 .. 0 0	
Castor, 1st pale "	0 5 .. 0 0	0 4½ .. 0 5½	
second "	0 4½ .. 6 5	0 4½ .. 0 4½	
infer. & dark .. "	0 4½ .. 0 0	0 4 .. 0 4½	
Bombay (in casks) .. "	0 4½ .. 0 4½	0 4 .. 0 4½	
Cod Liver .. per gall.	4 6 .. 6 3	5 0 .. 6 0	
Croton..... per oz.	0 3 .. 0 4	0 3½ .. 0 4½	
Essential Oils:			
Almond .. per lb.	35 0 .. 0 0	42 0 .. 0 0	
Anise-seed .. per lb.	12 0 .. 13 0	9 8 .. 9 9	
Bay .. per cwt.	65 0 .. 70 0	65 0 .. 0 0	
Bergamot .. per lb.	8 9 .. 15 0	8 0 .. 0 0	
Cajeput, (in bond) per oz.	0 1½ .. 0 3	0 1½ .. 0 0	
Caraway .. per lb.	5 6 .. 6 3	5 6 .. 6 3	
Cassia .. "	6 3 .. 0 0	4 4 .. 0 0	
Cinnamon .. per oz.	0 2 .. 5 0	0 10 .. 3 0	
Cinnamon-leaf.. "	0 2 .. 0 5	0 2 .. 0 9	

1872.				1871.				1872.				1871.					
s. d.				s. d.				s. d.				s. d.					
Essential Oils, continued:—								Oils, continued:—									
Citronello.....per oz.	0	2½	to 0 2½	0	1½	to 0 1½	0	1½	to 0 1½	Cod.....per tun	37	0	to 38	0	34	10	to 0 0
fino.....	0	2½	0 0	0	2½	0 0	0	2½	0 0	WHALE, South Sea, pale	38	0	to 39	0	33	0	to 33 10
Clove.....per lb.	4	5	0 0	2	4	0 0	2	4	0 0	yellow	30	0	to 37	0	33	0	to 0 0
Juniper.....	1	9	2 0	1	9	2 0	1	9	2 0	brown	32	0	to 33	0	30	0	to 31 0
Lavender.....	3	6	0 0	3	0	0 0	3	0	0 0	East India, Fish	28	5	to 28	10	30	0	to 0 0
Lemon.....	10	0	18 0	5	0	0 6	5	0	0 6	OLIVE, Galipoli.....	40	10	to 47	0	50	10	to 0 0
Lemongrass.....per oz.	0	5	0 0	0	2½	0 2½	0	2½	0 2½	Triste.....	45	10	to 40	0	50	0	to 31 0
Neroli.....	0	5	0 0	0	5	0 6	0	5	0 6	Lorient.....	43	10	to 44	0	48	10	to 49 0
Nutmeg.....	0	7	0 8	0	4	0 0½	0	4	0 0½	Mogador.....	43	0	to 0	0	48	0	to 48 0
Orange.....per lb.	7	0	8 0	5	0	7 0	5	0	7 0	Spanish.....	45	0	to 46	0	49	10	to 50 0
Otto of Roses.....per oz.	12	0	21 0	12	0	21 0	12	0	21 0	Sicily.....	45	0	to 45	10	50	0	to 51 0
Patchouli.....	4	0	4 3	3	0	0 0	3	0	0 0	COCONUT, Cochlin... per tun	37	10	to 38	0	38	0	to 39 0
Peppermint:										Ceylon..	35	5	to 35	10	30	0	to 30 10
American.....per lb.	13	0	14 0	12	6	14 0	12	6	14 0	Sydney	31	0	to 35	0			
English.....	30	0	33 0	33	0	34 0	33	0	34 0	GROUND NUT AND GINGELLY:							
Rosemary.....	1	9	2 0	1	9	2 0	1	9	2 0	Bombay.....	0	0	to 0	0	0	0	to 0 0
Sassafras.....	3	0	3 6	3	0	8 6	3	0	8 6	Madras.....	0	0	to 0	0	43	0	to 44 0
Spearment.....	4	0	16 0	4	0	16 0	4	0	16 0	PALM, fine.....	38	10	to 35	15	37	0	to 0 0
Thyme.....	1	10	2 0	1	10	2 0	1	10	2 0	LINSEED.....	30	5	to 30	10	33	10	to 33 15
Mace, expressed.. per oz.	0	1½	0 3	0	1½	0 3	0	1½	0 3	RAPESEED, English, pale	40	5	to 40	10	43	0	to 0 0
OPIMUM, Turkey.....per lb.	20	0	22 0	19	0	20 0	19	0	20 0	brown.....	38	10	to 0	0	43	10	to 0 0
inferior.....	12	0	19 0	12	0	18 0	12	0	18 0	Foreign pale.....	41	0	to 0	0	42	0	to 0 0
QUASSIA (bitter wood) per ton	60	0	90 0	60	0	70 0	60	0	70 0	brown.....	38	0	to 0	0	43	10	to 0 0
RHUBARB, China, good and										COTTONSEED.....	32	10	to 32	15	29	0	to 34 10
fine.....per lb.	2	3	6 0	2	0	6 4	2	0	6 4	LARD.....	44	0	to 45	0	50	0	to 52 0
Good, mid. to ord.	0	3	2 0	0	4	1 10	0	4	1 10	TALLOW.....	36	0	to 0	0	33	0	to 0 0
Dutch trimmed	9	0	9 6	0	0	0 0	0	0	0 0	TURPENTINE, American, cks.	43	0	to 43	6	37	0	to 0 0
Russian.....	0	0	0 0	0	0	0 0	0	0	0 0	PETROLEUM, Crudo.....	0	0	to 0	0	0	0	to 0 0
ROOTS—Calumba.....per cwt.	23	0	40 0	25	0	42 0	25	0	42 0	s. d.	1	5½	to 1	6	1	6½	to 1 7
China.....	23	0	28 0	22	0	24 0	22	0	24 0	Spirit ..	1	2	to 0	0	0	11	to 0 0
Galangal.....	16	0	19 0	17	0	20 0	17	0	20 0	SEEDS.							
Gentian.....	20	0	22 0	27	0	30 0	27	0	30 0	CANARY.....per qr.	48	0	to 52	0	52	0	to 58 0
Hellebore.....	30	0	32 0	30	0	35 0	30	0	35 0	CARAWAY, English per cwt.	38	0	to 44	0	0	0	to 0 0
Orris.....	40	0	70 0	65	0	80 0	65	0	80 0	German, &c.....	29	0	to 36	0	0	0	to 0 0
Pellitory.....	27	0	38 0	58	0	60 0	58	0	60 0	CORIANDER.....	20	0	to 25	0	0	0	to 0 0
Pink.....per lb.	0	9	1 3	0	9	1 3	0	9	1 3	HEMP.....per qr.	40	0	to 45	0	40	0	to 44 0
Rhatady.....	0	4	0 11	0	4	0 11	0	4	0 11	LINSEED, English per qr.	0	0	to 0	0	0	0	to 0 0
Seneca.....	4	0	4 1	4	6	4 7	4	6	4 7	Black Sea & Azof	59	0	to 0	0	58	6	to 0 0
Snake.....	1	1	1 2	1	4	1 6	1	4	1 6	Calcutta ..	64	0	to 04	6	02	0	to 63 0
SAFFRON, Spanish ..	27	0	38 0	35	0	44 0	35	0	44 0	Bombay ..	64	6	to 0	0	04	0	to 0 0
SALEP.....per cwt.	170	0	200 0	110	0	240 0	110	0	240 0	St. Petersburg.	57	6	to 0	0	0	0	to 0 0
SARSAPARILLA, Lima per lb.	0	7½	0 9	0	6	0 7½	0	6	0 7½	Mustard, brown.. per bshl.	13	0	to 16	0	0	0	to 0 0
Para.....	1	2	1 3	1	0	1 3	1	0	1 3	white..	8	0	to 9	6	9	0	to 9 6
Honduras.....	1	2	1 8½	1	2	1 7½	1	2	1 7½	POPPY, East India per qr.	61	0	to 02	0	57	0	to 58 0
Jamaica.....	1	7	2 11	1	7	3 0	1	7	3 0	SPICES.							
SASSAFRAS.....per cwt.	0	0	0 0	0	0	0 0	0	0	0 0	CASSIA LIGNEA...per cwt.	90	0	to 102	0	108	0	to 121 0
SOAMONY, Virgin ..per lb.	26	0	32 0	26	0	32 0	26	0	32 0	Vera.....	33	0	to 70	0	42	0	to 30 0
second & ordinary	10	0	25 0	10	0	25 0	10	0	25 0	Buds.....	125	0	to 130	0	125	0	to 135 0
SENNA, Bombay.....	0	1½	0 5	0	3½	0 0	0	3½	0 0	CINNAMON, Ceylon,							
Tinnivelly.....	0	1½	1 1	0	3½	1 6	0	3½	1 6	1st quality.....per lb.	2	8	to 3	9	2	8	to 3 8
Alexandria.....	0	2½	2 1	0	3½	1 7	0	3½	1 7	2nd do.....	2	1	to 3	7	2	0	to 3 6
SERMACETI, refined..	1	6	0 0	1	6	1 7	1	6	1 7	3rd do.....	1	8	to 2	11	1	10	to 3 0
American.....	1	2	1 3	1	2	1 3	1	2	1 3	Tellicherry.....	2	0	to 3	2	2	7	to 3 0
SQUILL.....	0	1	0 2	0	1½	0 2½	0	1½	0 2½	CLOVES, Penang....	1	3	to 1	5½	1	2	to 1 4
GUMS.								SEEDS.									
AMMONIAC drop ..per cwt.	140	0	200 0	80	0	150 0	80	0	150 0	Amboyna.....	0	3	to 0	11	0	4	to 0 6½
lump.....	80	0	130 0	55	0	75 0	55	0	75 0	Zanzibar.....	0	0½	to 0	0	0	2½	to 0 3
ANIMI, fine washed ..	280	0	330 0	260	0	335 0	260	0	335 0	GINGER, Jam., fine per cwt.	90	0	to 200	0	90	0	to 180 0
boldscraped ..	220	0	230 0	210	0	270 0	210	0	270 0	Ord. to good ..	46	0	to 87	0	42	0	to 87 0
sorts.....	140	0	230 0	140	0	230 0	140	0	230 0	African.....	43	0	to 0	0	33	0	to 34 0
dark.....	90	0	130 0	80	0	130 0	80	0	130 0	Bengal.....	39	0	to 0	0	28	0	to 0 0
ARABIC, E. I., fine										Malabar.....	9	0	to 0	0	0	0	to 0 0
pale picked ..	70	0	34 0	00	0	72 0	00	0	72 0	Cochin.....	44	0	to 130	0	43	0	to 125 0
arts, gd. to fin	60	0	69 0	52	0	65 0	52	0	65 0	PEPPER, Blk, Malabar, per lb.	0	6½	to 0	7½	0	0½	to 0 6½
garblings..	23	0	50 0	22	0	40 0	22	0	40 0	Singapore ..	0	6½	to 0	6½	0	5	to 0 6½
TURKEY, pick. gd to fin.	160	0	230 0	160	0	200 0	160	0	200 0	White, Tellicherry	0	0	to 0	0	0	0	to 0 0
second & inf.	35	0	150 0	85	0	155 0	85	0	155 0	Cayenne.....	1	6	to 1	11	0	9	to 1 6½
in sorte ..	65	0	80 0	65	0	80 0	65	0	80 0	MACE, 1st quality ..per lb.	3	11	to 4	4	4	4	to 4 7
Gedda.....	30	0	42 0	33	0	44 0	33	0	44 0	2nd and inferior..	3	0	to 3	10	3	11	to 4 3
BARBARY, white ..	50	0	55 0	0	0	0 0	0	0	0 0	NUTMEGS, 75 to 60 to lb.	3	4	to 4	0	3	2½	to 4 2
brown ..	36	0	44 0	44	0	46 0	44	0	46 0	90 to 30 ..	3	2	to 3	3	3	0	to 3 2
AUSTRALIAN.....	29	0	45 0	21	0	42 6	21	0	42 6	132 to 95 ..	2	9	to 3	1	2	7	to 3 0
ASSAFETIDA, com. to gd.	75	0	100 0	30	0	100 0	30	0	100 0	VARIOUS PRODUCTS.							
BENJAMIN, 1st qual.	200	0	520 0	160	0	400 0	160	0	400 0	COCHINEAL—							
2nd ..	150	0	210 0	150	0	215 0	150	0	215 0	Honduras, black ..per lb.	2	5	to 3	3	2	4	to 3 4

